REPORT RESUMES

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THE DEVELOPMENT AND IMPROVEMENT OF A PROGRAMED LEARNING SEQUENCE FOR USE IN CONSTRUCTING A TEACHING UNIT. FINAL REPORT.

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DESCRIPTORS- *PROGRAMED TEXTS, *TEACHER EDUCATION, *PROGRAMED INSTRUCTION, COLLEGE INSTRUCTION, *METHODS COURSES, TEACHER EDUCATION CURRICULUM, LESSON PLANS, *UNIT PLAN,

AN INTRINSIC PROGRAM ON THE SUBJECT OF CONSTRUCTION OF TEACHING UNITS WAS DESIGNED AND TESTED TO ASCERTAIN WHETHER STUDENTS OF EDUCATION WOULD LEARN AS EFFICIENTLY BY THE PROGRAM METHOD AS BY TRADITIONAL METHODS. THE 116 PAGE PROGRAMED TEXT COMPRISES FOUR SECTIONS--THE DEFINITION AND BACKGROUND OF THE TEACHING UNIT, THE YEARLY PLAN, THE TEACHING UNIT, AND THE DAILY LESSON PLAN. EIGHT CLASSES TOTALING 152 STUDENTS WERE EXPOSED TO TRADITIONAL INSTRUCTION, AND FOUR OF THESE USED THE PROGRAMEDD TEXT. A NONSTANDARDIZED, MULTIPLE-CHOICE, OBJECTIVE TEST, WHICH HAD BEEN DEVELOPED DURING THE TWO PILOT TESTS OF THE PROGRAM, WAS ADMINISTERED TO BOTH GROUPS AS A PRE AND POST-TEST. THE INSTRUCTOR AND TWO JUDGES GRADED THE TEACHING UNITS PRODUCED BY THE STUDENTS. A SHORT QUESTIONNAIRE WAS ALSO GIVEN. RESULTS INDICATED THAT STUDENTS WHO STUDIED THE PROGRAMED TEXT GAINED MORE KNOWLEDGE AND UNDERSTANDING OF THE SUBJECT THAN THOSE WHO WERE TAUGHT CONVENTIONALLY, BUT THAT THE PROGRAMED LEARNERS DID NOT DISPLAY GREATER ABILITY TO PREPARE TEACHING UNITS. THE TWO METHODS WERE EQUALLY EFFICIENT IN TERMS OF LEARNING TIME OUTSIDE OF CLASS, BUT WHEN CLASSROOM TIME WAS INCLUDED, THE PROGRAMED METHOD WAS MORE EFFICIENT. CONCLUSIONS WERE THAT THE PROGRAMED METHOD CAN BE SUBSTITUTED FOR THE CONVENTIONAL METHOD WITHOUT LOSS OF EFFICIENCY. THE ENTIRE PROGRAM, THE TEST AND QUESTIONNAIRES USED, AND RELEVANT TABLES ARE INCLUDED. (BB)

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U. S. DEPARTMENT OF
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Elizabeth S. Manera and
LeRoy H. Griffith

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Arizona State University

Tempe, Arizona

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E. INTRODUCTION

Recent technical advancements and increased educational requirements have made it necessary for teachers to intensify their utilization of methods which enable them to present materials more meaningfully to a greater number of students.[1] One method that has proven valuable in accomplishing this purpose has been the use of programed instructional devices. The success of programed instruction has been attributed to the manner in which it provides for individual differences. The program allows the students to work independently, proceeding through the programed sequence at their own pace. In it the students are corrected or substantiated on each new fact during active participation in the learning process.[2]

The Need and Value of the Study

With the population explosion, and the increased use of technology in society, more and more people are in need of the benefits of an advanced education. In trying to comply with the great demands for additional education, higher education officials find it difficult to prepare teachers quickly enough to supply society's educational needs. Even if it were possible to provide a sufficient number of teachers, using the present organization, the cost of educating them could be excessive. It is, therefore, essential that empirical evidence be gathered concerning the most economical, yet efficient, methods of preparing teachers while they are in college. Teacher education must become more efficient, revising and simplifying curricula and improving instructional techniques by utilizing as many of the new teaching devices and techniques as may be practical and educational.[3]

Programed instruction is one such device which can be used by the teacher to lighten the burden of routine chores and yet which will provide an effective means of teaching students in a variety of subject fields. It has been just over a decade since Skinner showed how the psychological principles of learning could be applied to the practical problems of teaching.[4] Yet, research activity has moved so rapidly that programed instruction is no longer a novelty. Even so, there remains a need for field study experiments using programed devices in actual classroom situations.[5]

The need for field studies is particularly great at the college level where enrollments have been increasing and the need for instructional improvement has been growing. For example, in a survey of six hundred and nine colleges and universities, the American Association of Colleges of Teacher Education reported that, although they were being conducted in a number of subject matter fields, only fourteen field studies in educational methods were utilizing programed materials. Of these fourteen studies, none specifically attempted to determine whether or not the concepts involved in constructing teaching units could be developed through programed instruction.[6]

Nor, is there any other research study reported in the literature which has specifically dealt with this subject. There was a need, therefore, to obtain empirical evidence to determine if the claimed advantages of programed instruction could be utilized in a situation where the student would be directed to develop a teaching unit. If this were possible, it would allow more classroom time for the consideration of other problems than those involved in the construction of a teaching unit. Students could use the programed material outside of class, prepare their teaching units, and use class time only for discussing problems which might occur in connection with the teaching unit, rather than on the mechanics of its preparation.

STATEMENT OF THE PROBLEM

It was the purpose of this study to develop field tested programed instructional materials that would be useful to teacher education program officials in more efficiently educating secondary school methods class students on the procedures to follow in developing a teaching unit. The study included a comparative evaluation of the students' understandings of the characteristics of teaching units and of their proficiency in constructing teaching units.

Major Questions to be Answered

In order to achieve the purpose of this study, answers to the following questions were sought:

1. Will the programed instructional method prove to be as efficient as a traditional teaching method in helping secondary methods class students construct teaching units?

2. Will the programed instructional method prove to be as efficient as a traditional teaching method in aiding secondary education methods class students in their achievement of knowledge about teaching units, and how they are constructed?

3. Will the programed instructional method prove to be as efficient as a traditional teaching method in the total amount of time each student spends in preparing his teaching unit?

Null Hypotheses to be Tested

In order to answer the major questions of this investigation, the following null hypotheses were tested:

1. There is no significant difference between the achievement scores for a group of secondary education methods class students instructed by a programed learning device and for a group of secondary education methods class students instructed by a traditional teaching method.

2. There is no significant difference between the judges' ratings of the student constructed teaching units for a group of secondary education methods class students instructed by a programed learning device and for a group of secondary education methods class students instructed by a traditional teaching method.

3. There is no significant difference between the total number of hours required to prepare teaching units for a group of secondary education methods class students instructed by a programed learning device and for a group of secondary education methods class students instructed by a traditional teaching method.

4. There is no significant difference between the total number of hours spent in library and research activities in the preparation of their teaching units for a group of secondary education methods class students instructed by a programed learning device and for a group of secondary education methods class students instructed by a traditional teaching method.

5. There is no significant difference between the total number of hours spent in writing and assembling their teaching units for a group of secondary education methods class students instructed by a programed learning device and for a group of secondary education methods class students instructed by a traditional teaching method.

F. METHOD

This section includes: (1) the research design which was employed in gathering the data needed to determine the results of the experiment, (2) the procedures employed to develop the data, and (3) the evaluational devices used in the study. A description of the university wherein the study was conducted, the teachers involved in the study, and the secondary education program within the College of Education are also included in this chapter so that the population used in this study can be better understood.

1. Design of Study

Figure I (Appendix A) depicts the modified quasi-experimental design used in this study. Although each individual in this study was not randomly assigned to a treatment class, each student did select the class which he wished to attend. Since the students did not know which classes would be the experimental and control classes, the randomness needed for a study of this nature was provided by their selection of classes. Too, using a table of random numbers, four of the eight classes were randomly selected to serve as the experimental group.

2. Procedures

In order to obtain the data to test the hypotheses posed in Section E, the following sequential steps were followed:

An intrinsically programed unit was constructed in scrambled book form according to the procedures suggested by both Crowder[7] and Markle.[8] The content for the programed book was based on the information contained in Unit I, Planning for Teaching and Learning, of the SE 411, Methods of Teaching and Evaluating in the Secondary School, Syllabus.[9]

Two pilot studies were conducted to determine unforeseen problems that might arise during this experiment. The factors considered during these pilot studies were testing, program presentation, programed text weaknesses and effectiveness of instructional programs as teaching devices.

The first pilot study was conducted during the summer of 1965 and included twelve volunteer students enrolled in SE 411, Methods of Teaching and Evaluating in the Secondary School, at Arizona State University, Tempe, Arizona. A tape recorder was used by each student to indicate specific points which needed improvement.

Using the comments and suggestions of the students in the pilot study, the programed book was revised. It was then evaluated by a panel of subject matter experts which consisted of six members of the Secondary Education Department of Arizona State University. Acting on the suggestions of these experts, the programed book was further modified and then printed for the second pilot study. One class of ten students enrolled in High School Methods, 323, at Grand Canyon College, Phoenix, Arizona, and twenty volunteer students enrolled in SE 411, Methods of Teaching and Evaluating in the Secondary School, at Arizona State University, comprised the population for the second pilot study. The volunteers who were used were informed that their participation in the pilot study would in no way affect their grade or work in their respective classes. The Student Response Sheet used in obtaining student comments on improving the program during the second pilot study was a modified form of the one suggested by Lysaught and Williams.[10] The Student Response Sheet proved to need further modification after being used in the pilot study. The final form used in this study may be noted in Appendix B.

Based on the results obtained from the evaluations of the second pilot study, the third edition of the programed book was prepared for use during the main study. The final sequence included 116 pages and covered the following major topics: (1) definition and background of the teaching unit, (2) yearly plan, (3) the teaching unit, and (4) the daily lesson plan. The appendix in the programed book also included a sample teaching unit for the students' reference.

a. The Population of the Study

For the more involved statistical analyses, the sample used in this investigation included 152 students enrolled in eight of the ten classes designated as SE 411, Methods of Teaching and Evaluating in the Secondary School, offered by the Secondary Education Department at Arizona State University during the spring semester of the 1965-66 school year. Methods of Teaching and Evaluating in the Secondary School, as outlined in the Arizona State University General Catalog, is a four semester credit hour course which prepares secondary education students in the following areas: (1) the procedures, (2) methods, (3) techniques, and (4) instruments of teaching and evaluating in the secondary schools.[11]

The classification of the students enrolled in SE 411 included graduates, seniors, juniors, and sophomores enrolled in the College of Education. Since the course SE 311, Principles and Curricula of Secondary Schools, helped to lay a foundation for teaching unit construction, those students who had not taken, or who were concurrently enrolled in this course, were not included in the statistical analysis used to test the first hypothesis, gain in the achievement test, and the second hypothesis, difference in the judges' rating of the teaching unit, although they did complete the questionnaire and those in the experimental group used the programed book.

b. Selection of the Experimental and Control Groups

During the spring semester of the 1965-66 school year, there were ten sections of SE 411, Methods of Teaching and Evaluating in the Secondary School, taught. There were four instructors who taught two classes each and two instructors who taught one class each. In order to lessen teacher variability, only the four instructors who had two classes each were used in the study. In this way each instructor taught one experimental and one control class. The eight classes which were used in the study were numbered one through eight. Using a table of random numbers four of the eight classes were randomly selected to serve as the experimental group (E) and the other four classes became known as the control group (C).

c. Procedures for the Main Study

It may be noted that Table I (Appendix C) contains a summary of the experimental procedures as outlined in this section.

All of the classes in the study were administered the content measuring pre-test February 10, 14, or 15, 1966.

After taking the pre-test, Group E, the experimental group, was given edition three of the programed book, Constructing a Teaching Unit. The book was introduced and directions for its use were explained. The instructor refrained from further discussion of the teaching unit during the rest of the ten week period. While the students in Group E prepared their teaching units outside of class, the class periods continued in the traditional way, and covered the other materials of the course outline with no reference being given to the programed materials.

Group C students, the control group, were taught how to develop a teaching unit during class time in the traditional manner. They did not use the programed book, but received instruction from their teachers and from any additional sources that were available.

After they had completed the construction of their teaching units, both groups were post-tested (Appendix B) during the eleventh week of the semester on April 13, and 14, 1966. Immediately after the test was administered all students received a questionnaire (Appendix B) relative to the construction of a teaching unit which they were asked to complete. Group C answered only three pertinent questions. Group E, however, answered the same three questions plus eight additional ones which were concerned with their opinions on several factors pertaining to the use of programed material in constructing a teaching unit.

Using the specially prepared evaluational criteria, the four instructors graded the teaching units for the pupils in their own classes. After all the student-prepared teaching units had been evaluated the first time, the identity of the student, the class number, and the instructor's name were hidden and then two unbiased judges evaluated them again, thereby providing three scores for each teaching unit. These ratings were analyzed to determine their reliability by an application of Kendall's Coefficient of Concordance.

Using the information gained from the Student Response sheets, the pre- and post-test gain scores, and teaching unit evaluations, the programed book was revised for the last time. The final revision is included in Appendix D.

3. Description of Arizona State University

School

Arizona State University was one of the three state universities in Arizona. Arizona State University, located in Tempe, Arizona, ranked second in total student enrollment with 21,728 resident and extension students during the second semester of 1965-66. There were eight colleges, two divisions, a Graduate School of Social Service Administration, a Graduate College, and fifty departments of instruction.

As one of the eight colleges, the College of Education contained seven departments which prepared students for positions as teachers, administrators, and other educational specialists. Among the seven departments was found the Secondary Education Department whose curriculum:

> . . . prepares students for service in the secondary school. Majors and minors are completed in the teaching fields desired. The curriculum has considerable flexibility for those who wish to pursue specialized work in addition to the regular expectations for teaching. This curriculum leads to the degree of Bachelor of Arts in Education and to the certification for teaching in the secondary school.
>
> SUGGESTED PATTERN. A program of 126 approved semester hours is required. This is divided as follows:
>
> | | |
> |---|---|
> | General Education . . . . | 40 semester hours |
> | Major Teaching Field . . . . | 45 semester hours |
> | Minor Teaching Field . . . . | 18 semester hours |
> | Professional Education . . . . | 25 semester hours[12] |

Faculty

Four faculty members from the Secondary Education Department of Arizona State University participated in this study. Each of them had earned a doctoral degree and had a minimum of eighteen years of professional education experience. The variety of educational experiences of these instructors may be noted in Table II (Appendix C). From this table it may be noted that two of the instructors had extensive experience in teaching educational methods classes with twenty and twenty-two classes each. The other two instructors had taught three and two classes, respectively.

4. Evaluational Devices Used in the Study

The pre-treatment and post-treatment content measuring instrument which was administered to collect data for this study was a sixty item multiple choice objective test constructed in order to determine the knowledge and understanding SE 411 students had of teaching unit construction. During the pilot studies there were four different pre-treatment and post-treatment content measuring instruments developed and administered. From these four tests the final measuring instrument was developed for use during the main study. The same instrument was given as the pre-test and the post-test.

The Kuder-Richardson Formula Number 20 was used to compute reliability coefficients based on item-total score interrelationships for the administered test. Application of this particular formula provides a coefficient of internal consistency. The reliability for the pre-test administration was 0.63 and for the post-test administration was 0.72. For other descriptive statistical results related to the content measuring instrument see Table III (Appendix C).

The Student Response Sheet, found in Appendix B, was used in evaluating the programed textbook. Lysaught and Williams indicate that this type of evaluational device is one of the most satisfactory forms to use for rapid review of the field test results.[13] A modified form was prepared for this study. This form provided columns for students to record the answers to the multiple-choice questions which they had selected, the page on which they had made a comment or question, as well as additional space for written comments or questions the student wished to make regarding a particular frame or response in the textbook.

The instrument used to evaluate student constructed teaching units was used by several members of the Department of Secondary Education at Arizona State University prior to its use in this study. Before this instrument was used in this study, it was inspected by five subject matter experts who judged it to be appropriate for use in evaluating the student constructed teaching units. To achieve uniformity in using the rating scale, prescribed instructions were given to the instructors on the use of the rating instrument. These instructions are included in Appendix B.

Two questionnaires were developed and given to the students upon the completion of the study. Copies of these questionnaires appear in Appendix B. Group C received a short form with three questions referring to the number of hours each student spent in preparing his teaching unit and earlier experience he had had with resource units. The longer form which was prepared for Group E also included these three items, as well as pertinent questions about the programed book.

Of the one-hundred and eighty-six students who enrolled in the eight methods classes one-hundred and fifty-two students, seventy-six in the experimental and seventy-six in the control class, were used in the statistical analyses used in testing Hypotheses one and two. If students lacked a pre-test or post-test score, an undergraduate cumulative grade-point average, or a teaching unit evaluation score, the students were dropped from the study. If the subjects were concurrently enrolled in both SE 311, Principles and Curricula of Secondary Education and SE 411, Methods of Teaching and Evaluating in the Secondary School, or were graduate students who were taking the class for certification, they were also dropped in an effort to control the student variable.

The total number of questionnaires varied for the two groups (E and C) because some of the subjects in the study lacked one or more of the necessary items for completing the statistical analysis. The number of total responses varied also on the questionnaires since the students did not answer all the questions. Since the questionnaires were answered anonymously, there was no way in which the questionnaires of those subjects who were dropped from the study could be removed.

5. Treatment of Data

The five null hypotheses posed in Section I were tested.

In order to test the null hypothesis that there was no significant difference in achievement, as measured, by the achievement test, the analysis of covariance technique was employed. In order to control initial individual differences, pre-test achievement scores and grade point averages were used as covariates in this analysis. Analysis of covariance, using grade point averages and pre-test achievement scores were also used to test the second null hypothesis that there was no significant difference in judges ratings of the student constructed teaching units.

The third null hypothesis was tested by ranking the total hours of preparation spent by students on the teaching units and performing a Mann-Whitney U-Test. The fourth null hypothesis was tested by ranking the number of hours spent by students in the library and in research and also performing a Mann-Whitney U-Test. The fifth null hypothesis was tested by ranking the number of hours spent by students in writing and assembling the teaching units and subsequently performing a Mann-Whitney U-Test.

To augment the discussion of the first two hypotheses, analysis of covariance tables were constructed, listing source of variation, degrees of freedom, sums of squares, mean squares, and F-values.

To clarify the findings relative to the last three hypotheses, several tables were constructed which listed the raw scores, ranked raw scores, frequency of raw and ranked raw scores by experimental and control group, total frequency, sum of the ranks for the experimental and control groups, the Mann-Whitney U-Test "z" score, and the level of significance at which the hypotheses were rejected or not rejected.

The students' responses to the questions on the number of hours required to prepare their teaching units were statistically treated by the Mann-Whitney U-Test while the other ten questions on the questionnaire for Group E were tabulated and the percentage of the total students selecting each categorical response was indicated.

G. RESULTS

The purpose of this chapter is to test the data in terms of the hypotheses stated in Section E. Descriptive data concerning the hours students spent in preparing their teaching units and their responses to a questionnaire which was used in evaluating the use of the programed sequence will also be considered. In performing the statistical analyses, considerable reliance was placed on the use of analysis of covariance and the Mann-Whitney U-Test.

1. Analysis of Post-Test Achievement Test Scores.

The first analysis was made to test the null hypothesis that there was no significant difference in the achievement of students in the control and experimental classes. In order to control initial differences, grade point averages and pre-test achievement test scores were used. From Table IV, Appendix C, it may be noted that the obtained F-value was 6.882 which was statistically significant at the .01 level of confidence. As a result, the null hypothesis was rejected. The experimental group students' achieved significantly greater knowledge of unit construction factors than did the students of the control group.

2. Analysis of Judges' Ratings.

The second analysis was made to test the null hypothesis that there was no significant difference in the judges' ratings of teaching units which were constructed by students in the control and experimental groups.

In order to control initial differences, grade point averages and pre-test achievement test scores were again used as co-variates. From Table V, Appendix C, it may be noted that the obtained F-value was 0.571, which was not statistically significant at the .01 level of confidence.

3. Analysis of the Time Spent in Preparation of the Teaching Unit.

The Mann-Whitney U-Test was used to test the null hypotheses which were related to the time spent in the preparation of the teaching unit.

Analysis of Total Number of Hours Spent Preparing Units

The preparation time of the teaching unit was analyzed on the basis of the total hours spent in its preparation. Total hours in this instance included both writing and library research time. The ranked total hours spent in preparation of the teaching units by Groups C and E are included in Table VI, Appendix C.

By referring to Table VI, it may be noted that, although the ranked total hours spent by the experimental group, 9,064 hours, was greater than the ranked total hours spent by the control group, 9,272 hours, the difference was not significant at the .05 level.

As a consequence, the third null hypothesis could not be rejected since the Z score of 0.36 was less than the critical z value of 1.96 needed for significance at the .05 level.

Analysis of Time Spent in Library Research

When the hours used in the preparation of the teaching units were ranked as to total hours spent in library research, the null hypothesis that the total hours spent in library research by Group E, while preparing the teaching unit, was not significantly different from the hours spent by Group C, could not be rejected at the .05 level of significance.

Table VII shows that, even though Group E spent fewer ranked total hours, 8,329 hours, than Group C, 9,626 hours, the difference was not significant at the .05 level. Therefore, the fourth null hypothesis could not be rejected since the z score of 1.10 was less than the critical z value of 1.96.

Analysis of Time Spent in Writing Units

Table VIII shows the results of the analysis of the ranked total number of hours spent in library research for Groups E and C. By referring to Table VIII (Appendix C) it may be noted that the difference in ranked total hours of the experimental group, 8,691.5 hours, was not significantly different from that of the control group, 9,074.5 hours, at the .05 level of significance. Therefore, the fifth null hypothesis could not be rejected since the z score of 0.50 was less than the critical z value of 1.96.

In summary, the tests of the three hypotheses indicated that the experimental and control groups were not significantly different with regard to total hours spent in both writing and library research.

Kendall's Coefficient of Concordance

In order to determine if the agreement between the three judges' ratings of student constructed teaching units was sufficiently high, Kendall's Coefficient of Concordance was computed.

Agreement of Judges' Ratings

The results of these computations are included in Table IX, (Appendix C), where it may be noted that Groups E and C coefficients were .91 and .89, respectively, a difference of only .02.

ANALYSIS OF QUESTIONNAIRE RESPONSES

In order to obtain data useful in improving the programed sequence, both Groups C and E responded to three questions regarding the time spent in: (1) library research, (2) actual writing time, and (3) the total time. Data pertaining to these questions have been considered in Section III of this chapter.

In addition to these three questions, Group E was asked to respond to seven other questionnaire items. These items gave the students who used the programed sequence an opportunity to subjectively evaluate various factors relative to their use of the book. Based upon the student responses to the items on the questionnaire and their comments written both on the program and on the Student Response Sheet, the programed sequence was revised. A summary of the data pertaining to their responses is included in tabular form in the following section as well as in Appendix C, Tables X through XIX.

Rating the Programed Booklet

In question number four, Group E students were asked to rate the extent to which the programed booklet aided them in preparing their teaching units. Their responses may be seen in Table X. Approximately ninety per cent of the respondents thought the program was of value to them in developing their teaching units. Only one person out of the ninety-eight thought the programed booklet was no help at all. Of the respondents 12.2 per cent indicated that the program was excellent, 36.8 per cent indicated by their responses that they felt that the programed sequence was very good, and 39.8 per cent of the students felt that the programed book was adequate. The remaining 10.2 per cent rated the program as poor.

Order of Preparation

The experimental group was asked to indicate whether they followed the order of preparation of the teaching unit indicated in the programed booklet. Table XI shows their responses to this question. Of the ninety-eight respondents, 85.7 per cent indicated they followed the sequence in the programed booklet, while 14.3 per cent indicated they followed a somewhat different order.

When asked if they preferred following the order indicated in the programed booklet, Table XII, only 16.9 per cent of Group E indicated they preferred that order, while 83.1 per cent of Group E would have preferred a different order.

Other Types of Aid

In order to determine the extent to which the programed booklet filled their needs for use in the preparation of a teaching unit, the students were asked if they had studied teaching units previously prepared, and whether they used other types of aid in developing their teaching units. Table XIII shows their responses to these questions. Of the ninety-eight who responded to the question on whether or not they used other units to aid them, only 41.7 per cent said they had studied other teaching units. The remaining 58.3 per cent noted that they were aided only by the program. Of the ninety-three students who responded to the item on use of other outside help, approximately 75 per cent said they had no other help than the teaching unit in the programed booklet.

Yearly Teaching Plan

Students were asked to indicate whether or not preparing yearly plans in conjunction with their teaching units helped them prepare their own units. Their responses to this question are included in Table XIV. From this table it may be noted that the greatest percentage (58.1 per cent) of ninety-three respondents indicated that the yearly plan helped. Thirty-nine, 41.9 per cent, of the respondents felt that developing a yearly plan was of little help to them in preparing their units.

Programing Format

Students were asked to indicate their preferences regarding the format of the programed booklet. Table XV indicates their responses to questions on five format factors. From this table it may be noted that the scrambled form was preferred by 47 per cent of ninety-eight respondents, while the remaining students preferred some form other than scrambled. Of these ninety-eight respondents 97 per cent also preferred single-spaced typing over other spacings. Of the ninety-five students who responded to questions on the spacing of materials on the pages of the program, 93.7 per cent like the spacing of the content as it appeared in the booklet. Of these same respondents, 86.3 per cent also indicated a preference for placing the content on the right-leaf only. When asked whether they preferred having content written on the left-leaf only, 16.9 per cent of eighty-three students stated they preferred this side.

Location of Summaries and Appendix Materials

The student preferences regarding the location of summaries are listed in Table XVI. From this table it may be ascertained that 44 per cent of ninety-three respondents preferred summaries at the end of each chapter, and fifty-one per cent of eighty-eight students preferred a general summary at the end of the booklet.

Table XVII shows the student preferences for placement of appendix materials. By referring to this table it may be noted that approximately 46 per cent of the ninety-four students preferred that the appendix materials be located in the body of the booklet, and only 29.7 per cent preferred that appendix materials be both in the body and at the end of the booklet.

Completeness of Program and Appendix

Students were asked to indicate whether or not they felt the program and the appendix materials were complete enough for use in developing their teaching units. Table XVIII shows that the greatest proportion felt that both the appendix and program were quite complete. Of the ninety-four students who responded to the question on the completeness of the appendix (85.1 per cent) considered the appendix of the programed book to be complete enough, while 72.1 per cent of ninety-three respondents considered the program itself to be sufficiently complete.

Repetitiousness and Necessity of Parts of Program

The students' attitudes regarding the repetitious nature and necessity of three parts of the program, the yearly plan, the teaching unit, and the daily lesson plan, are shown in Table XIX. From their responses it may be seen that the greatest proportion of the respondents did not feel the materials were too repetitious. Of the ninety-one respondents 88 per cent felt that the yearly plan was not repetitious, while 81.3 per cent responded in the same vein with regard to the teaching unit. Of ninety respondents, 83.3 per cent indicated that the materials on daily lesson plans were also not repetitious.

H. Discussion

There are certain demarcations in all experimental designs which determine how broadly the application of the results of the experiment may be applied. This study was delimited in the following ways:

In order to control the teacher differences during the spring semester 1965-66, only eight of the ten methods classes at Arizona State University were involved in this study. Two of the methods classes were not included in the study because they were taught by two different instructors with no way of controlling the teacher difference. Of the eight classes used, four were included in the control group and the remaining four classes served as the experimental group. Due to the sample size and the procedures followed, failure to include all of the students should have a limited effect on the outcomes of the study.

The rating device which was being used by several professors in the Secondary Education Department at Arizona State University was modified and utilized in evaluating the teaching units developed for this study. In order to assure reliability in their ratings, the instructors were given specific directions for its use.

Since the programed material was used in a general methods course rather than in a separate subject matter field methods course, it was constructed so as to be equally applicable to constructing teaching units in any subject matter field. Too, in the development of the program, a greater emphasis was probably placed on the format of the teaching unit than on the quality of the content materials. With additional appendix materials it would be possible to deal with both form and improved quality.

Since it was impossible to keep Groups C and E separated outside of the class, it is conceivable that Group E students might have obtained assistance from Group C students. Examples of teaching units, however, were provided in the programed instructional material, and it was assumed that with each revision of the programed learning book, that the need for outside assistance would diminish. Too, it was possible for Group C students to learn from those in the experimental group.

Lindquist[14] and Tate[15] both speak to the point of the limitations that are usually found when school experiments are performed. Many times the population to be tested is that which is accessible. Certain administrative practices and other practical difficulties frequently make it impossible to use any method other than students from intact groups. As a consequence, randomization of individuals assigned to groups may be difficult to achieve because of student class schedules. Although this limitation exists in this study, Winer[16] suggests that the practice of using students in intact school groups is not disadvantageous and that, for most practical purposes the groups can be considered as random samples from a common population. In this study students elected the sections of the classes they wished to attend and the experimental and control sections were randomly selected.

As was noted in Section G, the students who used the programed material to develop their teaching units had significantly greater knowledge and understanding of unit development factors when they completed their units than did the students who followed the traditional approach. This result might be expected since the items on the achievement test were based on materials found in the programed sequence. Although instructors were cognizant of the materials in the program and achievement test, they may have placed less stress on these topics in their lectures than was the case with the program.

Although fewer than one-half of the students preferred to use the type of scrambled form used in this study, they felt that this type of program was of considerable value to them in helping them develop their units. Too, the approach was as effective as the traditional method as may be evidenced by the failure to obtain significant differences between the ratings given to the control and experimental groups' units.

I. CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

1. Conclusions

Subject to the limitations of this investigation, the following conclusions seem warranted:

a. In situations where knowledge and understanding of teaching unit development and ability to develop teaching units are the objectives of instruction, programed learning materials of the type developed for use in this study may be substituted for the traditional methods of instruction without any loss of efficiency.

b. When students are asked to develop teaching units in methods classes and total time, excluding classtime, is a factor, either the traditional teaching method or programed sequence method may be used with equal efficiency. When total time includes classtime as well as out of class research and writing time, the time factor favors the experimental approach.

c. When it is desirable to develop and improve programed learning materials for use in secondary education methods classes, the approach used in this study would be applicable.

2. Implications

Based on the findings and conclusions of this study the following implication would seem justified:

Since adequate time for completing the stated objectives in methods classes at Arizona State University is a factor, it may be wise to have the students develop the required teaching unit by means of programed materials provided for this purpose.

3. Recommendations

Based on the results of this study and the conclusions drawn, the following recommendation is made:

Time is also limited in other secondary education classes. Where it is practicable, consideration should be given to the development and use of similar types of programed materials. Data concerning the construction of such instructional materials as courses of study and resource units could easily be programed and could be used to aid students in achieving the objectives of both correspondence and regular classes.

J. SUMMARY

1. Statement of the Problem

Throughout educational history there has been a constant attempt to improve instructional methods by providing new devices and systems for use in teaching. To improve modern methodology, programed learning sequences have been developed. While there has been much general study and research in the area of programed learning materials, too few studies have been made which used programed learning materials in educational methods classes at the college level.

It was the purpose of this study to develop field tested programed instructional materials that would be useful to teacher education program officials in more efficiently educating secondary school methods class students on the procedures to follow in developing a teaching unit.

2. Procedures

In order to improve the programed learning sequence for use in the secondary education classes at Arizona State University, two pilot studies were conducted. After each pilot study the programed booklet was revised and improved.

Four of the eight *Methods of Teaching and Evaluating in the Secondary School* classes were randomly assigned to Group E, the experimental group. Students in Group E used the programed learning booklet, *Constructing a Teaching Unit*, with no further directions provided by their instructors. The remaining four classes were used as Group C, the control group, and received directions on developing the teaching unit from their instructors.

Students in both Groups C and E were pre-tested to determine their knowledge and understanding of teaching unit construction. Following the treatment, a post-test on their knowledge of unit construction was given. In order to determine if there was any significant difference in the two groups' scores on the post-test, the analysis of covariance technique (with grade point averages and pre-test scores as co-variates) was used.

This technique was also used to determine if the difference in judges ratings of student constructed teaching units was significant. In addition, the Mann-Whitney U-Test was used to determine statistically if there were any significant differences between Groups E and C, in hours spent in teaching unit preparation.

In order to obtain data useful in improving the programed sequence a questionnaire seeking students' preferences was also given to the students.

3. Results

It was found that although the students who were exposed to the programed instructional method of constructing teaching units obtained a significantly greater amount of knowledge and understanding of unit development than did the students exposed to the traditional teaching method, they did not differ significantly in their ability to prepare teaching units.

4. Conclusions

Based on the findings, the following conclusions seem warranted.

1. In situations where knowledge and understanding of teaching unit development and ability to develop teaching units are the objectives of instruction, programed learning materials of the type developed for use in this study may be substituted for the traditional teaching methods of instruction without any loss of efficiency.

2. When students are asked to develop teaching units in methods classes and total time, excluding classtime, is a factor, either the traditional teaching method or the programed sequence method may be used with equal efficiency. When total time includes classtime as well as out of class research and writing time, the time factor favors the experimental approach.

3. When it is desirable to develop and improve programed learning materials for use in secondary education methods classes, the approach used in this study would be applicable.

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APPENDIX A

FIGURE I

MODIFICATION OF THE NON-EQUIVALENT CONTROL GROUP DESIGN AS USED IN THIS STUDY

Group E   R _ O _ _ _ _ _ _ X _ _ _ _ _ _ O

Group C   R   O   O

R - represents the randomization of treatment to intact groups

X - represents the exposure of the experimental group to the treatment, the effects of which are to be measured

O - represents the test administered before and after the treatment

- the left-to-right dimension indicates the temporal order
- parallel rows separated by a dashed line represent comparison groups not equated by random assignment of individuals to the groups, but by intact group random assignment

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APPENDIX B

QUESTIONNAIRE

NUMBER____________________
SECTION--TEST NUMBER

I DID USE THE PROGRAMED BOOKLET

1. How many (total number) _____ hours did you spend preparing your teaching unit?
   ____ hours in library and research time?
   ____ hours in writing and assembling the yearly plan, teaching unit, and daily lesson plan, exclusive of the typing.

2. How would you rate the programed booklet generally as an aid in preparing your work?
   ____ an excellent aid; ____ a very good aid; ____ a good aid;
   ____ a poor aid; ____ no help at all.

3. Had you prepared a resource unit before doing the teaching unit?
   ____yes ____ no.

4. Had you prepared a teaching unit before this one? ____yes ____ no.

5. Did you actually prepare your yearly plan, teaching unit, and lesson plans in the order that the programed booklet directed?
   ____ yes ____ no
   a. If your answer was no, indicate the order you actually followed. (Number below.)
      ____yearly plan
      ____identification
      ____objectives
      ____course content
      ____references
      ____teaching unit
      ____identification
      ____objectives
      ____introduction
      ____core of the unit
      ____evaluation
      ____lesson plans
      ____identification
      ____aims
      ____preparation
      ____presentation

   b. Would you have preferred to have followed a different order in preparing your work? ____yes ____no. If yes, indicate on the back of this sheet, the changes you would make.

6. Did you: A. Look at any other teaching units to aid your preparation? ____ yes ____ no
   b. Need to seek outside help? ____ yes ____ no. If yes, what source? ____________
   c. Indicate on the back of this sheet, the areas where you felt changes should be made so that outside help would be unnecessary.

7. Did you feel that the preparation of the yearly plan helped you in preparing your teaching unit? ____ yes ____ no.

8. Did you like the way the programed booklet has been:
   a. prepared in the scrambled form? ____ yes ____ no
   b. printed single-spaced? ____ yes ____ no
   c. spaced on the page? ____ yes ____ no
   d. printed on the right side of the page only? ____ yes ____ no
   e. I would prefer it printed on the left so that notes could be taken on the right. ____ yes ____ no

9. Would you have preferred to have had:
   a. a summary at the end of each chapter? ____ yes ____ no
   b. a general summary at the end of the booklet? ____ yes ____ no
   c. the appendix materials appear in the body of the booklet? ____ yes ____ no
   d. appendix materials appear both in the body and at the end? ____ yes ____ no

10. Was the program complete enough? ____ yes ____ no
    If not, what did it lack? (on back)
    Was the appendix complete enough? ____ yes ____ no
    If not, what did it lack?

11. Did you feel that any part of the work was repetitious and unnecessary for the:
    a. Yearly plan ____yes ____no . If so, what?
    b. Teaching unit ____yes ____no. If so, what?
    c. Daily lesson plan ____yes ____no. If so, what?

THANK YOU FOR YOUR COOPERATION AND HELP!

NUMBER________________________
SECTION--TEST NUMBER

I DID NOT USE THE PROGRAMED BOOKLET

1. I spent (total number) _____ hours in preparing my teaching unit;

_____ hours in library and research time.

_____ hours in writing and assembling the unit, daily lesson plan and yearly plan.

2. Have you prepared a resource unit? ____yes ____no

3. Have you prepared a teaching unit before this one?
____yes ____no

ORAL DIRECTIONS GIVEN TO INSTRUCTORS AND RATERS FOR USING TEACHING UNIT EVALUATION INSTRUMENT

The evaluation device which will be used to evaluate the student constructed teaching unit is a modified form of the evaluation instrument used by several members of the Department of Secondary Education at Arizona State University. You have all checked the criteria on this instrument and have indicated that you concur with the items included, as well as the points to be awarded for each major area.

The maximum points allowed for each item are listed in the left column, with the total points per area shown on the right side of the page.

The points given for the teaching unit and the daily lesson plans total one hundred points and may serve as the basis for your students' grades for their teaching units. The twenty points allotted to the yearly plan need not count toward the students' class grades, but should be evaluated to determine the usefulness of this section of the programed learning sequence in the total assignment.

When you have evaluated each teaching unit, place the evaluation sheets which are to be used in the study in the front of the teaching unit. Then record the total scores for each area on the summary sheet and distribute them to your students so they know how well they were evaluated on their teaching units.

Name ______________________________

Score ____________________________

EVALUATION SHEET FOR SE 411, FOR STUDENT CONSTRUCTED TEACHING UNIT AND DAILY LESSON PLANS

The outline lists the items which should be included in the teaching unit and daily lesson plans which the SE 411 students have constructed. The major headings are capitalized and the items which should be included under each of these headings are also listed. Do not mark the units so severely or leniently that all of your scores are high or low, or so moderately that you do not have any scores at either end of the scale.

SUBJECT MAJOR________________ UNIT TITLE______________________________

Evaluation of "Teaching Unit" (Total Points Possible - 100)

Identification	(3)	__________
General Objectives	(7)	__________
Introduction	(15)	__________
Core of the Unit	(30)	__________
Evaluation	(20)	__________
Bibliography or reference materials	(10)	__________
Daily Lesson Plans	(15)	__________
TOTAL		==========

- -

Make any additional comments you wish to in the space provided below.

I. THE TEACHING UNIT

A. Identification -- 3
1/21. Unit Title
1/22. School Period: Hour of the day in which the class meets.
1/23. Unit Dates: Beginning and completion dates for the unit.
1/24. Number of School Days the Unit will cover.

B. Specific Objectives -- 7
2 1. Specific knowledge and understandings which the unit will help the student develop.
2 2. Specific abilities and skills which the unit will help the student develop.
3 3. Specific attitudes and appreciations which the unit will help the student develop.

C. Unit Introduction -- 15
4 1. A narrative account of the introductory remarks made by the teacher which gives the need and rational for studying this unit.
4 2. A descriptive list of unit activities.
0 3. A concise description of the relationship of the present teaching unit to:
2 a. the preceding unit;
2 b. the following unit;
3 c. other areas in the secondary school curriculum.

D. Core of the unit --- 30
10 1. Specific Objectives: specific content and activities are selected to accomplish the specific unit objectives and recorded here.
5 2. Unit Content: the specific information which makes up the unit knowledge.
5 3. Unit Activities: the specific activities which the students participate in learning the unit content which accomplishes the unit objectives.
5 4. Resource Materials: include books, charts, periodical articles, pamphlets, or people.
5 5. Teaching Aids: any items which makes the lesson more efficient and effective, such as the tape recorder, chalkboard and chalk.

E. Evaluation --- 20
7 1. A unit test should include at least five of each of the following types of test items, unless otherwise authorized by professor:
a. Essay-discussion questions,
b. Completion items,
c. Matching items,
d. Multiple choice items,
e. True-false items

4 2. Directions for administering and scoring each section of the test.
3 3. A sample answer sheet and scoring key for the unit test.
2 4. Teacher self-evaluation instrument: a means by which a teacher can evaluate his own success.
2 5. Student self-evaluation instrument: a means by which students can evaluate his own success.
2 6. Method of reporting student performance to parents.

F. Bibliography -- 10
5 1. References for the teacher.
5 2. References for the student whose ability is:
a. Above average
b. Average
c. Below average

II. DAILY LESSON PLAN -- 15

1 1. Identification: The pertinent information about the class.
3 2. Objectives: specific aims which will be worked toward on a particular day.
3 3. Preparation: The activities, materials which the teacher must prepare before class.
2 4. Presentation: the order and time when each of the activities will take place.
3 5. Evaluation: the techniques which will be used by both teacher and student to evaluate the class.
1 6. Assignment: the learning experience which takes place outside of school.
1 7. Adjustment: suggestions for changing the class procedure if the time is too short or too long.
1 8. Remarks: Comments or reminders which will make the class run more smoothly.

100

III. Make any additional comments you wish in the space provided below and on the back of this sheet.

STUDENT RESPONSE SHEET

SE 411 SECTION________________ NAME________________________________

TEXTBOOK VERSION________________ DATE________________________________

In order to improve the quality of this programed textbook, we ask for your earnest cooperation in frankly answering this response sheet. Though your name is to be placed on this sheet, your instructors will not use these sheets for any reason and your answers will not therefore, affect your class grade in any way. These sheets will only be used by the investigator to provide additional insight into the strengths and weaknesses of the programed textbook, Constructing a Teaching Unit, so that the necessary revisions can be made.

Feel free to mark on the pages of your program any questions or comments which you feel would benefit or strengthen the program, then indicate the page on which you have made it on the response sheet so that it will be picked up and evaluated. If you need additional room for comments, number them correctly (according to the page they are found on) and place your comments on the back of the response sheets.

In the first column on this sheet you will find numbers which represent the pages in the programed booklet. Next to the page number a space is provided for you to check, indicating that you have made some type of question or comment pertaining to that particular page. In the next column you will find the answers to the multiple-choice questions clustered as you will find them in the program. Circle the first response that you make 1, if it is incorrect then make an "X" through your second choice 2, if it is also incorrect then place a straight line horizontally through your third choice 3, and for your fourth choice place a slash mark diagonally through the number 4. Since you are directed to move ahead as you make the correct response it will be possible for us to determine frames which are giving students problems and thereby improve them. Please keep this record accurately so that we will have an honest report of your responses. Thank you for your cooperation.

PAGE ON WHICH COMMENT WAS MADE	ANSWERS	COMMENT
________________________	1. 2.	________________________
________________________	3. 4. 5. 6.	________________________
________________________	7. 8.	________________________
________________________	9. 10.	________________________
________________________	11. 12.	________________________

PAGE ON WHICH COMMENT WAS MADE	ANSWERS	COMMENTS
	13. 14.	
	15. 16.	
	17. 18.	
	19. 20.	
	21. 22.	
	23. 24.	
	25. 26.	
	27. 28.	
	29. 30.	
	31. 32.	
	33. 34.	
	35. 36. 37.	
	38. 39.	
	40. 41.	
	42. 43.	
	44. 45.	
	46. 47.	
	48. 49.	

TEST ON
CONSTRUCTING A TEACHING UNIT

This is a diagnostic test which will not affect your class grade in any way. There are sixty multiple-choice questions. Do not mark on the test in any way, but place all your answers on the answer sheets provided. Indicate the statement which most accurately completes the statement by placing a mark under the appropriate column on the answer sheet. Answer all of the questions, guessing at any you do not know. Please read all the statements carefully.

1. The major parts of unit construction have been modified from:
   1. Herbarts five steps;
   2. Seven Cardinal Principles of Teaching;
   3. Recommendations from the Committee of Ten.

2. An organized collection of specific learning activities, concepts, and materials which the teacher actually uses to teach a theme or central topic is known as a:
   1. lesson plan;
   2. unit plan;
   3. resource unit.

3. Culminating or concluding activities often overlap with the developmental activities, but those which are peculiar only to culminating activities include all but one of the following. Select the answer which does not belong.
   1. Summary or report on developmental activity;
   2. film or slides depicting a new study area;
   3. displays or exhibits, pageant or dramatization for parents;
   4. written tests.

4. A teacher's plan for obtaining specific objectives through a specific learning activity or use of specific materials for a single period is referred to as a:
   1. lesson plan;
   2. teaching unit;
   3. resource unit;

5. Aims and objectives of teaching units should be developed to:
   1. set the pace for the learning experience;
   2. let the students know what to expect;
   3. aid the teacher in planning for the learning experience.

6. A teaching unit is a well-organized instructional plan which:
   1. is equivalent to a daily lesson plan;
   2. encompasses all the possible learning experiences in one subject area;
   3. outlines specific learning experiences in one subject area.

7. Curriculum studies which aided the final development of the teaching unit were the:
    1. Maryland and Prince George Core-Curriculum Plans;
    2. New York City Experiment and the Eight Year Study;
    3. Pueblo, Burke and Dalton Plans.

8. The objectives of lesson plans should be stated in terms of specific:
    1. activities;
    2. outcomes;
    3. learning techniques.

9. The lesson plan is related to the teaching unit in that:
    1. lesson plans are developed from the teaching unit;
    2. a group of lesson plans constitutes a teaching unit;
    3. a teaching unit is organized subject matter divided into lesson plans.

10. The teaching unit is developed for the use of:
    1. the teacher;
    2. the teacher and students;
    3. the students.

11. The yearly plan provides:
    1. a preview of the proposed year's study;
    2. a record of previous year's study;
    3. the required study areas for the year.

12. There are many teaching methods to select from when planning a teaching unit. It is wise to:
    1. find a method which works well with a particular class and use it as frequently as possible;
    2. use as many methods as possible;
    3. select only those methods which are applicable to the particular unit.

13. The purpose of evaluating teaching unit work is to:
    1. provide the teacher with a basis for student grades;
    2. provide the supervising teacher a means of evaluating teacher effectiveness;
    3. determine the effectiveness of the educational program in relation to the objective.

14. The first time that the term "unit of study" was specifically referred to as a method of organization was in the:
    1. Winnetka Plan;
    2. Morrison Plan;
    3. Dalton Plan.

15. The purposes of the teaching unit are compatible with those for education generally in that they provide learning experiences which will aid student's growth in:
    1. learning facts and skills;
    2. understandings, values and skills;
    3. knowledge and appreciations.

16. When selecting course or unit objectives it is necessary to use some type of criteria. Which of the following is not an important criteria?
    1. Will it fulfill the basic human needs;
    2. Is it compatible with democratic ideals;
    3. Is it worded in professional language;
    4. Is it compatible with all other objectives.

17. The resource unit is a comprehensive treatment of a specific part of the total year's study whereas the yearly plan is:
    1. a comprehensive treatment of the total year's study;
    2. a general treatment of the total year's study;
    3. a list of the units for the total year's study.

18. The difference between a subject matter and experience unit is:
    1. the use of problem-solving technique by experience units;
    2. the emphasis placed on content or activities;
    3. the time needed to complete each type of unit;
    4. the planning needed to complete each type of unit.

19. Specific aims and objectives of a teaching unit should be revised:
    1. continuously in light of the total instructional program;
    2. periodically by the curriculum committee;
    3. yearly by the teacher.

20. All teaching units should include at least these major items:
    1. an identification, specific objectives, assignments, and remarks;
    2. specific objectives, unit introduction, core of the unit, and evaluation;
    3. an identification, unit introduction, course content, and references.

21. Teaching unit objectives which determine the progress and direction of the unit work in achieving the general educational goals are:
    1. more specific than yearly plan objectives;
    2. really identical with yearly plan objectives;
    3. less specific than yearly plan objectives.

22. The advantages of unit teaching include:
    1. a provision for an interrelatedness of subject matter and opportunities for using skills in a functional manner;
    2. an easy teaching method because of the organization of the subject matter and skills to be learned;
    3. a highly structured plan formulated for the teacher.

23. The teaching unit which is based on a pre-planned subject matter unit, but whose final selection of subject matter and activities is planned by students and teachers as the unit work progresses, is known as:
    1. an experience unit;
    2. a subject matter unit;
    3. a core unit.

24. The length of time when the students are busiest on a variety of unit developmental activities usually represent the:
    1. longest single time division of a unit of work;
    2. shortest single time division of a unit of work;
    3. same as any other part of the unit activities.

25. The culminating part of the unit should be more than an appraisal or evaluation of the unit work. It should also include:
    1. the teacher's summary indicating which objectives were actually accomplished;
    2. remedial work as well as training in organizing and summarizing the unit work;
    3. opportunities for student presentations to other classes or parents;
    4. all of the above.

26. The purpose of the unit introduction is to:
    1. arouse student interest in the unit work;
    2. indicate the scope of the unit within the yearly plan;
    3. both of the above.

27. Unit objectives aid the teacher and his students as they plan for class by:
    1. determining class content and activities;
    2. determining resource materials and teaching aids;
    3. both of the above.

28. When unit objectives are restated in the core of the unit the teacher is aided by:
    1. having the students help with the planning;
    2. showing directly the relationships of the objectives to the activities which are planned;
    3. reminding the teacher of the objectives so he won't forget.

29. The core of the unit should include five of the following items. Select the one item which does not belong in the core of the unit:
1. specific objectives;
2. subject matter content;
3. activities;
4. resource materials;
5. bibliography;
6. teaching aids.

30. Though there are many types of evaluation in the teaching unit there should be three types:
1. student, parent and teacher evaluation;
2. teacher evaluation of the students; principal evaluation of the students and evaluation of the teacher;
3. student self-evaluation, teacher self-evaluation, and teacher evaluation of the students.

31. A teaching unit bibliography should include books and periodicals:
1. for teacher planning;
2. for student's use;
3. for both students and teachers.

32. There are many evaluation techniques and indicators of teacher effectiveness in addition to a testing program which might include all but one of the following. Select the item which the teacher would NOT use:
1. Student and teacher self-evaluation;
2. student enthusiasm and interest in class work;
3. parent's comments;
4. other teachers comments.

33. Self-evaluation is one of the most valuable types of appraisal which can be used by both teachers and students because:
1. the teacher will base class grades on such evaluations;
2. teachers or students must be aware of their own strengths and weaknesses before they can improve them;
3. it is the easiest type of evaluation to carry out.

34. Techniques which were developed in early attempts to deviate from the "assign-study-recite-test" method and which are still used today are found in such examples as:
1. the job book, syllabus, and workbook;
2. the "project" and "activity" curriculums and large blocks of work;
3. the job book, the "project" curriculum and homogeneous groupings.

35. The various types of planning which must be utilized by the teacher as he prepares to teach his classes are:
1. faculty, teacher, and student planning;
2. state, county, and district planning;
3. yearly, unit, and daily planning.

36. The teaching unit stresses four points which are evident in the format. Which of the following is not among them?
    1. a clear statement of objectives which students should derive from the unit;
    2. an explanation of how these objectives will be achieved through the unit activities;
    3. a detailed listing of many possible activities to be used in accomplishing these objectives;
    4. definite steps to be pursued in its development;
    5. provision for both individual and group work.

37. Teaching units make possible flexibility in class planning which is important because:
    1. new areas can be explored and new methods used to provide for individual differences;
    2. it provides for different types of evaluation which will better evaluate varying students ability;
    3. new areas can be explored which makes the class more interesting.

38. Arbitrary distinctions are often made to differentiate between types of teaching units developed under different educational philosophies and curriculum plans, but basically the differences are due to the:
    1. kinds of subject matter content and unit activities;
    2. kinds of objectives, subject matter content and unit activities;
    3. kinds of objectives, unit activities, and evaluation techniques.

39. When selecting the unit activities the activities should be determined by:
    1. the teacher's ability to direct the students in the activities;
    2. the state and local curriculum guide;
    3. the student's interests and abilities.

40. The resource unit is like the course of study in that they both:
    1. are comprehensive treatments of classwork;
    2. are general treatments of the subject matter;
    3. are treating the same subject matter.

41. Lesson plans should be kept on file:
    1. so that successful approaches can be repeated with succeeding classes;
    2. for future reference to improve the planning of similar units;
    3. for the principal or supervisor to review them during teacher evaluation.

42. Teacher-pupil planning is justified on the grounds that:
    1. students are more highly motivated to work on the planned activities;
    2. it takes the heavy burden of planning for so many varied student interests and abilities off the teacher alone;
    3. it provides motivation work as well as an opportunity to function within a democratic framework.

43. The primary purpose of the developmental step of the teaching unit is:
    1. to attain the objectives set for the unit through planned activities;
    2. to motivate the students to accomplish the objectives;
    3. to integrate the work of the unit with the rest of the course.

44. The objectives of the unit core aid the teacher by:
    1. helping to involve the pupils in planning for achieving the objectives;
    2. showing the direct relationship of the objectives to the activities planned;
    3. showing the relationship of the content to the activities.

45. The unit activities are divided into three categories:
    1. the beginning, middle, and ending activities;
    2. initiatory, developmental, and culminating activities;
    3. library, classroom, and out-of-class activities.

46. Parent reports are an important part of the total evaluation program. Select the item which does not result from parents reports.
    1. good public relations;
    2. parents evaluation of the classroom activities aids the teacher in improving the class;
    3. parents can help the student accomplish the course objectives;
    4. many personal student problems can be avoided or improved.

47. The method of organization and instruction which is probably most widely used in secondary schools today is the:
    1. project method;
    2. problem method;
    3. unit method.

48. The daily lesson plan should provide:
    1. a topical outline of the class plan;
    2. a tentative agenda for the class and a set of notes for the teacher;
    3. bibliographical listing for teacher reference.

49. The length of time that it requires to complete a unit varies according to:
    1. when the class accomplishes the unit objectives;
    2. when the teacher feels he has accomplished all he can;
    3. when the yearly plan indicates a new unit must be started.

50. Evaluation techniques should be used to measure:
    1. faculty knowledge;
    2. social attitudes and values;
    3. skills and new interests;
    4. all of the above.

51. One type of evaluational device which widely samples unit information, providing uniform answers is the:
    1. essay test;
    2. objective test;
    3. questionnaires.

52. A free-answer evaluational device which may or may not be highly structured is referred to as:
    1. an essay test;
    2. an objective test;
    3. a self-appraisal device.

53. When preparing a teaching unit, the evaluation section should include:
    1. sample questions to include on tests;
    2. an indication of what type of items will be used and how they will be related to the unit objectives;
    3. evaluation items representing student self-appraisal, teacher self-appraisal, and teacher appraisal of the students.

54. Teacher-pupil planning is justified on the grounds that:
    1. students are more highly motivated to work on the subject;
    2. it takes the heavy burden of planning off the teacher alone;
    3. it provides motivation work as well as an opportunity to function within a democratic framework.

55. The unit introduction should show the interrelatedness of the:
    1. previous and following units to the new unit;
    2. new unit to the total curriculum;
    3. both of the above.

56. Activities included in the core of the unit should be:
    1. required of all students with no optional ones;
    2. optional for all students;
    3. varied for the students within the class but each one required of some student in the class.

57. Evaluation is such an important part of the unit that:
    1. it should take many forms and be a continuous thing;
    2. it should be given extensive time at the end of the unit;
    3. it should be used primarily for diagnostic purposes.

58. In the daily lesson plan a place should be provided for adjustment of the lesson. This means that:
    1. there is a place for any comments or reminders which will make the class run more smoothly;
    2. there should be suggestions for class work if there is too much or too little time at the end of the class period;
    3. there should be varied assignments for slow and advanced students.

59. Lesson plans aid the teacher in answering the students' question, "Why do we have to study this?" by:
   1. stating the objectives which will be obtained through the selected area of study;
   2. stating the materials and activities which will be used in class and are of interest to the students;
   3. stating the suggested activities for various levels of student abilities.

60. Fragmentary presentation of subject matter is avoided when using the unit approach because:
   1. all subject areas are coordinated to support one another;
   2. the entire course is organized around central themes or topics with all related material taught at one time;
   3. duplication is avoided with advanced planning required by the unit plan.

APPENDIX C

TABLE I

SUMMARY OF EXPERIMENTAL PROCEDURE

GROUP	PRE-TEST	TREATMENT	POST-TEST	STATISTICAL ANALYSIS
E (4 classes, taught by instructors A, B, C, & D.)	A non-standardized test was given to all classes to test pre-treatment knowledge.	These students used the programed sequence, *Constructing a Teaching Unit*, without aid from the instructor.	The post-test was the same test as the pre-test.	Analysis of covariance and the Mann-Whitney U-Test were the major statistical techniques employed in this study. Kendall's Coefficient of Concordance was used to determine the equivalence of the three judges' ratings of the teaching units.
C (4 classes taught by instructors A, B, C, & D.)	The same test used with Group E was administered.	These students did not use the programed sequence. Instead they were taught how to construct a teaching unit in a traditional manner by the instructor.	The same test used with Group E was administered.	

TABLE II

PROFESSIONAL EXPERIENCE OF PROFESSORS ENGAGED IN THE STUDY

Professor	Number Years at A.S.U.	Number Year at Other Colleges	Number Semesters Taught SE 411	Number Years High School Teacher	Other Experience
A	2 sem.	0	3	7	6 yrs. Superintendent school district. 4 yrs. Jefferson County, Colorado, Director, Secondary Education.
B	1 sem.	3 summer sessions Univ. of Wyoming	2	8	12 yrs. Junior High and senior high school principal.
C	2 yrs.	3 years Kansas State 4 years Emporia State Teachers College	22	8	4 yrs. principal Kansas
D	6 yrs.	1 year Univ. of Wyoming 1 year Oregon State Col. 3 years Arkansas St. Col.	20	1	None

TABLE III

MEAN, STANDARD DEVIATION, RELIABILITY AND STANDARD ERROR FOR THE PRE-TEST - POST-TEST INSTRUMENT

STATISTIC	PRE-TEST	POST-TEST
Mean	38.24	43.08
Standard Deviation	5.49	5.90
Reliability	0.63	0.72
Standard Error	3.35	3.11

TABLE IV

ANALYSIS OF COVARIANCE FOR POST-TEST SCORES

SOURCE	DF	YY	SUM-SQUARES (DUE)	SUM-SQUARES (ABOUT)	DF	MEAN-SQUARE
TREATMENT (BETWEEN)	1	168,4211				
ERROR (WITHIN)	150	4257,8947	1512,4525	2745,4423	148	18,5503
TREATMENT +ERROR (TOTAL)	151	4426,3158	1553,2050	2873,1108	149	
DIFFERENCE FOR TESTING ADJUSTED TREATMENT MEANS				127,6685	1	127,6685

NULL HYPOTHESIS. NO DIFFERENCE AMONG TREATMENTS AFTER ADJUSTING WITH COVARIATES.

F(1, 148)= 6,882*

*An F of 6.81 is necessary for significance.

TABLE V

ANALYSIS OF COVARIANCE FOR RATINGS OF TEACHING UNITS

SOURCE	DF	YY	SUM-SQUARES (DUE)	SUM-SQUARES (ABOUT)	DF	MEAN-SQUARE
TREATMENT (BETWEEN)	1	142,1643				
ERROR (WITHIN)	150	82378,9343	12256,5678	70122,3665	148	473,7998
TREATMENT + ERROR (TOTAL)	151	82521,0986	12127,9764	70393,1222	149	
DIFFERENCE FOR TESTING ADJUSTED TREATMENT MEANS				270,7557	1	270,7557

NULL HYPOTHESIS. NO DIFFERENCE AMONG TREATMENTS AFTER ADJUSTING WITH COVARIATES.

F(1, 148)= 0.571*

*An F of 6.81 is necessary for significance.

TABLE VI

MANN-WHITNEY U TEST OF RANKED TOTAL HOURS SPENT IN PREPARATION OF A TEACHING UNIT

	Experimental Group	Control Group
Total Frequency	93	98
Total Rank	9,064.0	9.272.0
z = 0.36*		$p > .05$

*A z of 1.96 was necessary for significance.

TABLE VII

MANN-WHITNEY U TEST OF RANKED TOTAL HOURS SPENT IN LIBRARY RESEARCH WHILE PREPARING A TEACHING UNIT

	Experimental Group	Control Group
Total Frequency	92	97
Total Rank	8,329.0	9,626.0
z = 1.10*		$p > .05$

*A z of 1.96 was necessary for significance.

TABLE VIII

MANN-WHITNEY U TEST OF RANKED TOTAL HOURS SPENT IN WRITING A TEACHING UNIT

	Experimental Group	Control Group
Total Frequency	90	98
Total Rank	8,691.5	9,074.5
z = 0.50*		p<.05

*A z of 1.96 was necessary for significance.

TABLE IX

KENDALL'S COEFFICIENT OF CONCORDANCE FOR THE JUDGES' RATINGS OF GROUPS E AND C STUDENTS' TEACHING UNITS

Group	Coefficient
Control	.89
Experimental	.91

TABLE X

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY FOR RATINGS OF THE PROGRAMED BOOKLET AS AN AID IN PREPARATION OF THE TEACHING UNIT

Ratings	Frequency	Percentage
Excellent	12	12.2
Very good	36	36.8
Adequate	39	39.8
Poor	10	10.2
No help at all	1	1.0

TABLE XI

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS FOLLOWING THE SAME ORDER AND NOT FOLLOWING THE SAME ORDER IN THE PREPARATION OF TEACHING MATERIALS AS SUGGESTED IN THE PROGRAMED BOOKLET

Order	Frequency	Percentage
Same	85	85.7
Not the Same	13	14.3
TOTAL	98	100.0

TABLE XII

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS PREFERRING TO FOLLOW THE SAME ORDER AND A DIFFERENT ORDER IN THE PREPARATION OF TEACHING UNITS

Preparation Sequence	Frequency	Percentage
Yes	16	16.9
No	79	83.1
TOTAL	95	100.0

TABLE XIII

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS USING OR NOT USING OTHER TYPES OF AID IN PREPARATION OF THE TEACHING UNIT

	Yes		No		
Type of Aid	Freq.	%	Freq.	%	Total
Other Teaching Units	41	41.7	57	58.3	98
Outside Help	24	25.8	69	74.2	93

TABLE XIV

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS WHO FELT THAT PREPARATION OF THE YEARLY PLAN HELPED OR DID NOT HELP IN PREPARATION OF THE TEACHING UNIT

Response	Frequency	Percentage
Helped	54	58.1
Did not help	39	41.9
TOTAL	93	100.0

TABLE XV

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS' PREFERENCES REGARDING VARIOUS FORMAT FACTORS

Factors	Yes		No		Total
	Freq.	%	Freq.	%	
Scrambled Form	46	47.0	52	53.0	98
Single Spaced	95	96.9	3	3.1	98
Spacing of content on the page as in booklet	89	93.7	6	6.3	95
Content printed on right-leaf only	82	86.3	13	13.7	95
Content printed on left-leaf only	14	16.9	69	83.1	83

TABLE XVI

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS' PREFERENCES REGARDING SUMMARIES

Preference	Yes		No		Total
	Freq.	%	Freq.	%	
Summary at end of each chapter	41	44.1	52	55.9	93
General Summary at end of booklet	45	51.1	43	48.9	88

TABLE XVII

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS' PREFERENCES REGARDING LOCATION OF APPENDIX MATERIALS

Location	Yes		No		Total
	Freq.	%	Freq.	%	
Body of Booklet	43	45.7	51	54.3	94
Both body and end of Booklet	27	29.7	64	70.3	91

TABLE XVIII

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS' REGARDING WHETHER OR NOT THE PROGRAM AND APPENDIX WERE COMPLETE ENOUGH

Category	Yes		No		Total
	Freq.	%	Freq.	%	
Program	67	72.1	26	27.9	93
Appendix	80	85.1	14	14.9	94

TABLE XIX

FREQUENCY AND PERCENTAGE OF TOTAL FREQUENCY OF STUDENTS' CONSIDERING VARIOUS PARTS OF THE PROGRAM AS REPETITIOUS AND UNNECESSARY

Part	Yes		No		Total
	Freq.	%	Freq.	%	
Yearly Plan	11	12.0	80	88.0	91
Teaching Unit	15	18.7	74	81.3	91
Daily Lesson Plan	15	16.7	75	83.3	90

APPENDIX D

CONSTRUCTING A TEACHING UNIT

A Programed Learning Device

CONSTRUCTING A TEACHING UNIT

A Programed Learning Device

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ABSTRACT

0. ERIC REPORT RESUME

An intrinsically programed instructional sequence, which was designed to aid students in developing teaching units, was constructed in scrambled book form. Two pilot studies were conducted in order to improve the programed sequence and the other materials used in the main study. Four of eight undergraduate secondary education methods classes were randomly assigned to Group E, the experimental group. Students in Group E used the programed learning booklet, with no further directions provided by their instructors. The students in the remaining four classes were used as Group C, the control group, and received directions on developing teaching units from their instructors. All students were pre-tested to determine their knowledge of unit construction. Following the treatment, a post-test on their knowledge of factors in unit construction was given. Analysis of co-variance (using pre-test scores and grade point averages as co-variates) was used to determine if post-test scores and judges' ratings of units were significantly different. It was found that although the students in Group E obtained a significantly greater amount of knowledge about unit development factors they did not differ significantly from Group C students in their ability to prepare teaching units. It was concluded that the programed sequence used in this study could be substituted for the traditional instructional method with no less of efficiency.

Figure 3

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CONSTRUCTING A TEACHING UNIT

PREFACE

This is a self-instructional booklet which has been written to aid prospective teachers in constructing teaching units. It has been designed for seniors in the College of Education who have had instruction in curriculum and basic education courses. The purpose of this booklet is to aid you in constructing a teaching unit. By the time you have completed this booklet, you should have completed your own teaching unit.

This programed learning booklet has been developed as a scramble book in the manner devised by Norman A. Crowder. It will be impossible for you to read the booklet pages consecutively, though the pages will be numbered in the usual manner. Since you will not read the pages consecutively, a bookmark may be useful in keeping your place as you read this booklet.

Following a segment of information, known as a frame, there will often be a multiple-choice question. When you come to a multiple-choice question, select the best answer, and then turn to the page number indicated. Answer the questions carefully because the rate with which you proceed through this book will depend on your ability to select the right answer to the multiple-choice questions at the end of each frame in the learning sequence. If you have missed an answer, return to the frame with the question and reread the entire frame before selecting another answer.

Throughout the booklet there will be references to materials which are found in the appendix. When this happens, a specific reference and page will be given so that you will be able to locate the materials which will be of help to you as you construct your teaching unit. Refer to them as often as you wish.

Due to the nature of this booklet it is suggested that you NOT use any other reference pertaining to unit construction, which might be at your disposal, unless you are directed to do so by this program. There are, however, a number of instances where it will be necessary for you to refer to library references so that your background information for the materials which go into preparing a unit might be supplemented. When this is necessary, please utilize the library to whatever extent you feel is necessary. If, for any reason, you do not understand some portion of the program and you are not able to figure it out for yourself, consult your instructor. Also note this on the response sheet which accompanies this publication so that this can be made more understandable for future readers.

Read all sections carefully and complete each step in the construction of your teaching unit as you are instructed. Do NOT read ahead without doing the required work on your unit construction. In this way your teaching unit will be complete when you read the last page of this booklet.

However, as you finish each section, you may wish to refer to the TEACHING UNIT CHECKLEST, page C-110, to determine if you have completed all the required items for the section. The checklist also serves as an index for easy reference in case you lose your place in the booklet.

PROGRAM OBJECTIVES

Objectives of this program are to help prospective teachers:

1. To be able to understand the basic information concerning a teaching unit which includes:
    a. Identifying the broad concepts upon which the unit will be based,
    b. Defining the meaning of a teaching unit,
    c. Explaining the purpose of developing a teaching unit,
    d. Outlining the historical development of the teaching unit.

2. To be able to relate the teaching unit to:
    a. The course of study,
    b. The resource unit,
    c. The lesson plan.

3. To be able to construct a teaching unit in a subject area from a general course outline using the prescribed format in preparing:
    a. The stated objectives for the total unit,
    b. The general unit introduction,
    c. The organization of the unit core,
    d. The evaluation methods,
    e. The bibliography.

4. To be able to prepare lesson plans from teaching unit material.

Are you willing to try and achieve these objectives? Ready! Let's go!

Turn to page 5 and begin the program.

This booklet will not make "sense" if you try to read it in the same way in which you read other books. It has been prepared for you to learn at your own rate but you must follow directions. This you have not done! In order to turn to this page you disregarded what you were told to do.

TURN TO PAGE 3 AND FOLLOW THE INSTRUCTIONS AS YOU WERE DIRECTED.

(from page 3)

CHAPTER I.

The objectives of this chapter will help prospective teachers develop an understanding of the basic information concerning the teaching unit which includes:

a. Identifying the broad concepts upon which the unit will be based,

b. Defining the meaning of a teaching unit,

c. Explaining the purpose of developing a teaching unit,

d. Outlining the historical development of the teaching unit.

Turn to page 8.

(from page 8)

1. The purpose of the teaching unit is the same as that of education generally, that is to provide learning experiences which will aid the student's growth in desired knowledge and understandings, appreciations and values, and abilities and skills needed by democratic citizens. (See "Three Levels of Planning for a Unit of Study -- The Yearly Plan, the Teaching Unit, and the Daily Lesson Plan," Appendix A, page A-80.)

Excellent! This is certainly the correct answer. Without a doubt it is the objective or purpose of education to prepare its young people to assume their adult roles in a democratic society. They cannot do this, however, if they have not acquired the understanding which stems from factual knowledge. They must develop an appreciation not only for knowledge, but also for values which are derived from this knowledge. In addition to these, there are many skills which are needed for effective and efficient living. Education must provide its students opportunities to have experiences which will improve their understanding, skills and appreciations or it will not fulfill society's needs.

Let us look at the evolution of the teaching unit before we start considering the actual construction of one. With a general understanding of how and why the teaching unit was developed we will better be able to utilize them in our teaching.

Historically, the evolution of the teaching unit concept was brought about by a number of classroom organizational changes. These changes were made to overcome the disadvantages of the "assign-study-recite-test" teaching method. Some of the earlier changes were included in the Pueblo, Burk, Dalton, and Winnetka Plans.

One of the first such changes took place in Pueblo, Colorado in 1888. Superintendent Preston W. Search replaced group recitation with an individual study and instruction plan. In this so called Pueblo Plan, each student worked alone and at his own speed, a principle which was later utilized in unit work. Classes and group work were dispensed with except in such fields as music and physical education.

An ardent follower of Superintendent Search was Frederic Burk, principal of the San Francisco State Normal School. In 1913, the so-called Burk Plan was introduced. It was quite similar to the Pueblo Plan, but was better organized. Again, the principle of independent study, where the students were given self-instruction sheets and tests which they completed at their own rate of speed, was used.

Turn to the next page!

(from page 6)

A third plan which aided in the development of the unit concept was the Dalton Plan. This plan was devised by Helen Parkhurst in the early 1920's for the schools in Dalton, Massachusetts. The key idea in this plan was the use of a "job book" or student work contract. The Dalton Plan provided the student an opportunity to work at his own rate of speed and in his own way, but, he had to assume responsibility to complete the unit problem or project to which he agreed in his contract or job book. A contract set forth a definite amount of reading, exercises, and written work to be completed within a specified length of time. The student worked alone except for a daily conference period with the teacher when he evaluated his accomplishments for the day.

Similarly, in 1924, Superintendent Carlton Washburn created the Winnetka Plan which also used the "job book". A set number of units or projects were established for each grade. Each student could proceed at his own rate in mastering the subject matter, which was required of all students. Each morning the students used their "job-books" to study the "common essentials", such as mathematics or reading. During the afternoon, group work was emphasized with specialized activities such as music, art, or literature. By including group work the Winnetka Plan was considered to be stronger than the Dalton Plan.

You are now ready for your second question. Select the answer that you think is correct and turn to the page number indicated after that answer.

Numerous plans to reorganize instructional methods and curricula were devised to overcome the weaknesses of the "assign-study-recite-test" teaching method. Which of the following plans contributed to the unit concept of teaching?

a. The Pueblo Plan;
b. The Burk Plan;
c. The Dalton Plan;
d. The Winnetka Plan.

Your answer:

3) a, b, c, and d — Turn to page 13

4) a, b, and c — Turn to page 12

5) a, b, and d — Turn to page 11

6) b, c, and d — Turn to page 10

(from page 5)

The purpose of the teaching unit is inherent in its definition. It may be defined as: (a) a well-organized instructional plan, (b) as outline of specific learning experiences for a particular class, (c) and an outline devised to aid the achievement of particular educational goals. It is the purpose of the teaching unit to aid the student in integrating a series of related learning experiences which are a part of his vast educational experiences. These experiences are intended to fulfill the educational goals desired for each student which include aiding his growth in desired understandings, values, and skills, all of which are needed for attaining a mature level of democratic citizenship.

Now you are ready for your first multiple-choice question. Read all of the responses given, then select the best answer. Turn to the page indicated following the answer you have selected.

The purpose of the teaching unit is the same as that of education generally. Its purpose is to provide learning experiences which will aid the students' growth in desired:

1. understandings, values, and skills needed by democratic citizens. Turn to page 6.
2. facts and skills which will be needed by democratic citizens. Turn to page 9.

(from page 8)

2. The purpose of the teaching unit is the same as that of education generally; that is, to provide learning experiences which will aid the student's growth in desired facts and skills which will be needed by democratic citizens.

No, your answer is only partially right. Look again at the statement you have selected. Facts serve as the foundation for understanding, but it is the understanding of facts and being able to apply them at the proper time which makes the difference in whether an individual is an effective citizen or not. It is, therefore, the understanding which is important. Skills and facts are certainly important. Without them we could not function effectively, but we must have understanding and a sense of appreciation before the skills can serve the purpose for which they are learned. Now you can readily see that more is needed than just facts and skills. Return to page 8 and reread the panel and select another answer.

(from page 7)

6. Your answer to which of the following plans contributed to the unit concept of teaching was: Number Six - b. the Burk Plan, c. the Dalton Plan, and d. the Winnetka Plan.

You are right in that each of these plans did contribute to the development of the teaching unit, but unfortunately you overlooked the contribution of the Pueblo and Burk Plans. Return to page 7 and reread the panel selecting another answer.

(from page 7)

5. Your answer to which of the following plans contributed to the unit concept of teaching was: Number Five - a. the Pueblo Plan, b. the Burk Plan, and d. the Winnetka Plan.

No! You are right as far as you answered, but the Dalton Plan also made a contribution which you have overlooked. Return to page 7 and reread the paragraph concerning the Dalton Plan and then select another answer.

(from page 7)

4. Oh! Oh! Your answer to which of the early plans contributed to the unit concept of teaching was: Number Four - a. the Pueblo Plan, b. Burk Plan, and c. the Dalton Plan.

You are right as far as you have gone, however, you overlooked the contribution of the Winnetka Plan. Return to page 7 and reread the paragraph on the Winnetka Plan to determine its contribution, then select another answer.

(from page 7)

3. You selected the following plans as contributing to the unit concept of teaching: a, b, c, and d. a. the Pueblo Plan, b. the Burk Plan, c. the Dalton Plan, and d. the Winnetka Plan.

You are absolutely correct. Each one played a role in the development of the teaching unit concept in an attempt to do away with the weaknesses of the "assign-study-recite-test" teaching method.

Henry C. Morrison was the first to use the term "unit of study" when he proposed that the organization of subject matter and classroom experiences be correlated with the learning products we wish the students to achieve. He wanted the educational processes to aid the students in adjusting to their environment and the stated educational goals. Morrison felt that there was no in between; the student either adjusts to his environment or he does not. Consequently the student either obtains the educational goals or he does not. Morrison, therefore, proposed that the students achieve this adjustment through a series of five steps reminiscent of Herbart's. The steps were: (1) exploration, (2) presentation, (3) assimilation, (4) organization, and (5) adjustment. To utilize these five steps a new type of organization was necessary. In 1913, as director of the University of Chicago High School, Morrison organized the curriculum in large blocks of related subject matter or units of work, each of which required several school weeks to complete. This type of organization was intended to aid student adjustment through the aforementioned five steps, develop student skill in reflective thought or problem-solving while they gained in ability to carry on independent study.

Here is your next question! To verify your answer, turn to the indicated page.

The major contribution of the so-called Morrison Plan to the development of the unit concept of teaching was:

7. organizing the subject matter in small sequential steps so as to present it to be learned in an easier manner. Turn to page 14.

8. organizing large blocks of subject matter around a central theme which provides a better method for accomplishing the stated unit objectives. Turn to page 16.

(from page 13)

7. YOUR ANSWER: Organizing and presenting subject matter in a better way for learning was the major contribution of the Morrison plan to the unit concept of teaching.

No, this is not the best answer. Organizing and presenting subject matter was part of Morrison's plan, but the major emphasis was intended to be in developing skill in reflective thought or problem-solving and developing ability to carry on independent study. Therefore, turn to page 13 and select the correct answer.

(from page 16)

10. Too bad, you must have been daydreaming as you have selected only part of the answer. The job book was part of the early techniques used, but the work book or syllabus was developed later as an outgrowth of the job book. Reread the panel on page 16 and select the correct answer.

(from page 13)

8. Number Eight - Organizing subject matter in a large block, around a central theme which leads to the stated unit objectives, was your answer to the major contribution of the Morrison plan to the unit concept of teaching.

Yes! This is certainly true since units (a) do take large blocks of time, (b) are organized around a central theme, and (c) seek to achieve unit objectives which include developing student skill in reflective thinking and ability to carry on independent study.

Though the Pueblo, Burk, Dalton, Winnetka and Morrison Plans have not all enjoyed wide use, certain techniques which they developed have become an important part of today's classroom organization and are often used in connection with the teaching unit. Examples of these techniques are: modification of the job book which developed into a workbook or syllabus; homogeneous grouping, which placed students of similar ability together; the "project" or "activity" curriculum, which developed around large blocks or units of work covering related subject matter through both individual and group projects and activities.

Techniques which were developed in early attempts to deviate from the "assign-study-recite-test" method and which are still used today are found in such examples as:

9. the job book, homogeneous grouping and the "project" or "activity" curriculums. Turn to page 17.

10. the job book, workbook or syllabus. Turn to page 15.

(from page 16)

9. You selected number nine - the job book, homogeneous grouping and the "project" or "activity" curriculums as your answer to: which techniques evolved from early attempts to deviate from the "assign-study-recite-test" method and which are still used today.

Very good! Now that you have recognized these attempts to improve instruction, turn to the next page for further discussion.

(from page 17)

CHAPTER 2.

The objectives of this chapter will help prospective teachers:

1. Relate the teaching unit to:
    a. The yearly plan,
    b. The resource unit,
    c. The lesson plan.
2. Complete the yearly plan before beginning the teaching unit.

Turn to page 20.

(from page 21)

11. Your answer to the three levels of planning was: faculty, teacher and student planning. We would all agree that each teacher must be adept at planning with each of these three groups but at this point we are interested in the levels of planning in which each teacher must be proficient. Return to page 21, reread the panel, and then make another selection.

(from page 18)

There is a need for much pre-planning on the part of the teacher when he's responsible for teaching a group of students. He must be able to see the relationships of several levels of planning, as well as perform effectively at each level. These levels are: (a) yearly plan, (b) the unit plan, and (c) the daily lesson plan. Though all three types of planning require similar skills and have similar purposes, the concepts behind them vary.

The yearly plan, often prepared by a faculty committee, serves as the general framework upon which the total year's work is based. The course of study, as the yearly plan is sometimes called, should be preplanned to (a) identify the major goals or objectives of the course, (b) schedule the units so as to provide a balanced and properly sequenced program which allots more time for those units which should be emphasized and less time for those that should receive less emphasis, and, (c) anticipate advanced preparations which need to be made to prevent possible problems; i.e., arrangements for field trips, consultants, or special teaching aids.

Teaching by the unit method causes one to organize the course into a series of central themes or unit topics. Around these themes related subject matter content materials are organized. This avoids the fragmentary presentation which might occur if the teacher plans the lessons on a day to day basis. Since the unit brings together all related materials in close succession, the relationships within the materials are more easily seen and facilitate integration and retention of what has been learned.

In developing a pre-planned unit, it is not always possible to know what students will accomplish each day they are studying the unit content. As a consequence, while teaching a given unit, it is necessary to utilize a daily lesson plan.

The daily lesson plan describes specifically the classroom activities and materials which have been selected from the unit plan for a specific day. These are not isolated topics following each other, but a sequential series of activities and materials which have been selected from the overall unit plan. A daily lesson plan should be like the advice a father gave his daughter about a dress: "It should be long enough to cover the subject, but short enough to be interesting." A good lesson plan, like a unit plan, should be concise, yet flexible. It coordinates teaching, the students' learning, and teaching materials so as to achieve the goals set forth in the objectives.

(from page 20)

There are three levels of planning which must be considered by the teacher as he prepares to teach his classes. These three levels of planning are:

(11) Faculty planning, teacher planning, and student planning. Turn to page 19.

(12) Yearly plan, unit plan and daily lesson plan. Turn to page 22.

(from page 21)

12. Ah, you are so right! Number twelve - the yearly plan, the unit, and the daily lesson plans are the three levels of planning with which each teacher must be proficient. Now that you have become familiar with these plans in a general way, let's look at them a little more closely so that we might see how each of the three levels inter-relate.

The yearly plan is often referred to as the course of study or course outline. The yearly plan for the course has changed historically from a brief outline of subject matter to that of a flexible guide which now includes much information for the teacher on activities, materials, teaching aids, and evaluation suggestions, as well as a wealth of information on the subject matter. The yearly plan is often developed by committees consisting of administrative and teaching personnel. It may be necessary, however, for an individual teacher to develop his own yearly plan in a school situation where none is available. By preplanning, the teacher can suit the course outline to his particular students' needs by (a) identifying the major goals or objectives of the course, (b) scheduling the units so as to provide a balanced and properly sequenced program, alloting more time for those that should receive less emphasis, and (c) anticipating advanced preparations which need to be made to prevent possible problems; i.e., arrangements for field trips, consultants, or special teaching aids.

The yearly plan is an overview of the year's study which serves as a guide for the teacher when planning his unit divisions, as well as all the arrangements necessary for the year's work.

(13) If you agree with this statement turn to page 24.

(14) If you disagree with this statement turn to page 23.

(from page 22)

14. Oh! Oh! You did not read the statement very well since you selected number fourteen. This yearly plan IS an overview, survey, or preview of the year's study which serves as a guide for the teacher when planning his unit divisions. It is the purpose of the yearly plan to provide a suggested outline for the year which will aid the teacher in his planning.

Return to page 22, reread the panel, and you will understand why the statement given is true.

(from page 22)

13. You agreed that a yearly plan is an overview of the year's study which serves as a guide for the teacher when planning his unit divisions as well as all the arrangements necessary for the year's work.

Yes! This is true, for without such a guide the teacher would have gaps, confusion, overlaps, and general inefficiency in attaining the course objectives.

Now that you understand the concept and purposes of a yearly plan, let us develop such a plan or course outline for a class in a hypothetical high school. There are several factors which you must consider as you develop your yearly plan. These factors are:

1. SUBJECT MATTER FIELD: In which subject matter field (Mathematics, Social Studies, English Language Arts, Foreign Language, Industrial Arts, Health and Physical Education, and the like) do you want to develop your yearly plan? You will probably wish to develop your teaching unit in either your major or minor subject matter field so the selection of the subject matter field in which you wish to develop content materials should not be difficult. Furthermore, if you developed a resource unit in a subject matter field in S. E. 311, you may wish to use the same subject matter field for this project.

2. SPECIFIC SUBJECT WITHIN THE SUBJECT MATTER FIELD: In which subject (algebra, geometry, trigonometry) from your major field (mathematics), do you wish to develop content materials? You may wish to develop content material for a subject you expect to teach while you are doing your student teaching or you may select the same subject that you used when developing your resource unit.

3. COURSE TITLE: The subject field and subject will basically determine the nature of the course title. However, the title can easily restrict or increase the scope of the course. A course title such as "U. S. History", restricts the course more than a title like "Problems of Democracy".

4. CLASS LEVEL: Where in the sequential development of the total secondary curriculum and specifically within the subject field you have chosen, will this course best fit? On which level (freshman, sophomore, junior, or senior) will you teach this class?

(from page 24)

5. PREREQUISITES: What other courses should your students have before they take this course, if any?

6. CLASS PERIODS: How many periods will the class meet per week and what will be the length of the class period? Arbitrarily determine this.

7. COURSE DURATION: Will your course be conducted for one semester or two semesters?

8. STUDENT AGE: What will be the age range of your students?

9. CLASS SIZE: How many students will you have in each class? Will all your classes be the same size or will you be able to utilize large and small class groups? Does the nature of your subject area determine class size?

10. STUDENT INTELLIGENCE: For what level of intelligence (superior, average, or below average) are you planning this course? What will be the range of your students' capabilities?

Briefly list your decisions concerning items one through ten on a sheet of paper and keep for later reference. (See Appendix A, page A-80 which shows the format to use for I. Yearly Plan, A. Identification.) DO NOT continue until you have completed Part I. Yearly Plan, A. Identification 1 - 10. Turn to the next page.

(from page 25)

Now you are ready to prepare a yearly plan in your chosen subject. You must begin by selecting the course objectives which will serve as goals toward which your students will progress throughout your course. If the American culture were not as diversified as it is today, it would be unnecessary to select objectives. But the many groups represented in our culture do not have mutually compatible objectives concerning educational goals. It must be decided, therefore, what is most important for the students to learn in the classroom and what behavioral changes are desired in the students. Here, therefore, lies the task which is ahead of you ... to select the yearly plan objectives for your course.

Determine what you wish your students to accomplish in your course. These purposes, then, become your course objectives. Though these will be stated in general terms, they should be definite and obtainable within the course structure. After having stated the objectives, both the teacher and students will be able to see the relationship of the student activities to the purposes or objectives of the course. When the goals are in sight, both teacher and students become more highly motivated.

There are many types of objectives which are useful to teachers who are responsible for developing instructional materials for their pupils. These objectives extend from very general school district objectives to the specific goals of a daily lesson. Teachers can use the general goals of the district as a frame of reference as they develop course goals. Course goals, too, give direction to the teacher as she selects the units of the course and the specific objectives of each unit. The specific unit objectives can be utilized as objectives in the daily lesson plans.

As indicated earlier, it is generally accepted that the purposes or objectives of general education can be achieved through the course work where the students develop knowledge and understanding, attitudes and appreciations, and abilities and skills in many areas. When concerned with a particular course, the yearly plan objectives should be stated in terms of what that particular course will be able to accomplish for the general educational goals.

When selecting an objective, it is necessary to use some type of criteria. Curriculum committees often use the following list:

1. Will it meet the demands of society?
2. Will it fulfill the basic human needs?
3. Is it consistent with democratic ideals?
4. Is it compatible with all other objectives?
5. Is it worded in behavioristic terms?

(from page 26)

When listing your course objectives in your yearly plan, list them under three headings:

1. knowledge and understanding,
2. abilities and skills, and
3. attitudes and appreciations.

(See Appendix A, I. Yearly Plan, B. General Objectives, page 80 for format.)

NOW LIST THE OBJECTIVES FOR YOUR YEARLY PLAN!

Have you completed listing your objectives? If you have, check your objectives to determine if they meet all the criteria listed. Do not continue until you have completed your objectives and checked them against the criteria. When you have completed this, turn to the next page.

(from page 27)

Now that you have completed the course objectives you are ready to prepare a brief outline or list of the unit titles. If you developed a list of unit topics for use in your resource unit in SE 311, you may wish to include this same list here. Be sure, however, that the unit topics relate to the course objectives you have just developed. When preparing your unit list, follow the format shown in the sample course outline in Appendix A, I. Yearly Plan, C. Course Content, page A-81.

When you have completed the yearly plan, you are ready to begin the actual teaching unit. Now turn to page 29.

(from page 28)

CHAPTER 3.

Specifically, the objectives of Chapter 3, if they are achieved, will enable the prospective teacher to construct a teaching unit in a subject field from a general course outline using the prescribed format which includes:

a. The specific objectives for the unit,
b. The general unit introduction,
c. The organization of the unit core,
d. The evaluation methods,
e. The bibliography.

Turn to page 32.

(from page 32)

15. You said that the advantages of unit teaching are many. Among them are the interrelatedness of subject matter and opportunities for using skills in a functional manner.

Correct! Though these are only two advantages they are extremely important ones. You will remember that flexibility in scheduling, student-teacher planning and providing for individual needs and interests are also advantages. A teacher must be competent to use unit organization, as it is not the easiest method of teaching, but the rewards are many.

The teaching unit stresses four points which are evident in the format. Among them are:

a) a clear statement of objectives which students should derive from the unit,

b) an explanation of how these objectives will be achieved through the unit activities,

c) definite steps to be pursued in its development, and

d) provision for both individual and group work.

All four items are important and should be stressed in the teaching unit.

With this in mind, you are now ready to differentiate between a teaching unit and a resource unit. The teaching unit has been defined as a well-organized instructional plan which outlines specific learning experiences in which a particular class will participate, thus achieving particular educational goals. As you learned in SE 311, the resource unit is a collection of suggestions for use in developing possible teaching units. Resource units include more materials and activities than one class can use in achieving its basic educational goals. One would select from the many projects, resources and bibliographical selections in the resource unit the specific materials he wishes to use with the class he plans to teach. From the resource unit, then, the teaching unit is constructed. More than one teaching unit may be developed from any one resource unit.

(from page 30)

A resource unit differs from a teaching unit in that:

(17) the resource unit contains only the resources which the teacher expects to utilize during the unit, while the teaching unit contains the specific daily activities to be used during the unit. Turn to page 34.

(18) the resource unit contains many more suggestions than a teacher could use in one teaching unit, while the teaching unit contains only the specific activities which the teacher will use while teaching the unit. Turn to page 35.

(from page 29)

The unit concept is not a panacea which will solve all teachers' problems and guarantee them success. However, it is generally accepted as one of the best methods of organizing today's curriculum.

The value of teaching units lies in several factors. Since information is not compartmentalized, subject matter lines may be broken down and students may begin to see the relationships among the various subject areas. Paul Revere's Ride becomes more than a poem in literature class or a human interest story in history class. Communication, transportation, geography and economics assume a role in the total understanding of the events of Longfellow's Poem. Many educational goals may draw nearer as a result of such integrated learning.

Student-teacher planning is another strength of the unit plan. Through planning, student needs, interests and differences will be recognized and cared for with flexible planning which is another important factor in the unit method. The program can be further adjusted as new students' needs or interests appear.

The flexibility, which is possible with unit planning, permits the teacher and students to explore new areas and to use the best materials and methods as they are developed, rather than waiting to use them at a later time.

Another value of organizing content material into units of work is that skills, i.e., reading, writing, computing, and constructing, are put to work in a functional manner which may not happen when another approach is used.

The advantages of unit teaching are many.

Among them are:

(15) Teaching units provide for an interrelatedness of subject matter and opportunities for using skills in a functional manner. Turn to page 30.

(16) Teaching units provide an easy teaching method because of the organization of the subject matter and skills to be learned. Turn to page 33.

(from page 32)

16. Oh-Oh- you weren't reading carefully! Organizing subject matter and skills in a teaching unit becomes progressively easier to use with practice, but it takes a skillful teacher to be able to use teacher-pupil planning and carry on the other facets of the teaching unit.

Return to page 32, reread the panel, and select the correct answer.

(from page 31)

17. Hold on there - you selected: A resource unit differs from a teaching unit in that the resource unit contains only the resources which the teacher expects to utilize during the unit, while the teaching unit contains the specific daily activities to be used during the unit.

The resource unit contains more suggestions than the teacher can use in one teaching unit. Since the resource unit is much more encompassing than the teaching units, several teaching units may be developed from one resource unit.

Now, return to page 31 and select the correct answer.

(from page 30)

18. Very good! You have selected the best definition for a resource unit as compared with a teaching unit. It said: "the resource unit contains many suggestions which the teacher may use, while the teaching unit contains the specific activities which the teacher uses while teaching the unit".

There are often arbitrary distinctions made concerning different types of teaching units. Where these distinctions are made, they are made primarily because of the emphasis one wishes to place on (a) the objectives of the unit, (b) the subject matter, or (c) the activities. Since all teaching units are plans of instruction which include objectives, content material and activities, these distinctions should not be overemphasized, though it is valuable to note that there are different types of teaching units.

Arbitrary distinctions are made to differentiate types of units which are developed under different educational philosophies and curriculum plans. The type of differences are due to the:

(19) kind of subject matter content and unit activities.
Turn to page 41.

(20) emphasis placed on the subject matter and the unit activities.
Turn to page 36.

(from page 35)

20. Arbitrary distinctions are made to differentiate types of units which are developed under different educational philosophies and curriculum plans. The types of differences are due to the emphasis on subject matter and unit activities.

Yes, this is the correct answer. How the unit will be used will determine the type of teaching unit you have. Though some authors will make a number of other distinctions, we will differentiate between only two major types of units: (a) the subject matter unit, and (b) the experience unit.

All units must include subject matter, but when the primary emphasis is placed on the subject matter then this becomes a subject matter unit. When the emphasis is on the unit activities then it is called an experience unit. The objective of the subject matter unit places little emphasis on the activities through which the subject matter is learned. In addition to this distinction, many teachers feel they must completely pre-plan the content materials they expect to teach during the period of time allocated to the unit. This precludes any opportunity for student-teacher planning which is considered so vital to the experience unit.

The unit which stresses content material and is totally pre-planned by the teacher is known as:

(21) an experience unit. Turn to page 37.

(22) a subject matter unit. Turn to page 38.

(from page 36)

21. The pre-planned unit which the teacher prepares for his class is known as an experience unit.

Just a minute now. In the last frame we discussed the two types of teaching units, which we decided were divided according to the purpose of the units. When the emphasis is placed on the subject matter then does it not follow that the type of unit would be a subject matter unit? Likewise, if the emphasis is on the experience or activities, then would it not be called an experience unit?

Please go back to page 36, reread the panel, and select another answer.

(from page 35)

22. The pre-planned unit which the teacher prepares for his class is known as a subject matter unit.

Very good, this is true. When the subject matter is the most important consideration the teaching unit is called a subject matter unit. If, however, there is a greater emphasis placed on the activities or experiences used to learn the subject matter, then the unit is referred to as an experience unit. In developing such a unit, the teacher may or may not have a pre-planned subject matter unit upon which to base his planning of unit activities with the students. The entire unit may be generally planned by the teacher and students before any work is begun, but the experience unit need not be developed in advance but may be cooperatively planned by the teacher and students as the unit progresses. In this sense the students may have a greater opportunity to assist in determining the objectives as well as the content material of the unit.

The teaching unit which may be based upon a pre-planned subject matter unit, but is planned by students and teachers as the unit work progresses, is known as:

(23) an experience unit. Turn to page 39.

(24) a subject matter unit. Turn to page 43.

(from page 38)

23. The teaching unit which is based upon a pre-planned subject matter unit and is cooperatively planned by students and teachers as the unit work progresses is known as an experience unit.

Good! You are right! Now that you understand the differences in unit types, we will discuss the actual construction of your teaching unit. For our purposes, it is best for you to construct a subject matter teaching unit since you do not have a group of students to work with in developing an experience unit. Your unit should be developed within the yearly plan that you formulated for frame 13, page 24. (Also refer to Appendix A, I. Yearly Plan, page A-80, if needed.) As you develop this subject matter unit you should remember that the activities you use may be as important as the subject matter in achieving your objectives. Furthermore, when you actually use the subject matter unit in your teaching, you may wish to give some emphasis to student-teacher planning. Refer to your yearly plan outline you prepared for frame 13. Now, make the following decisions concerning the unit identification.

1. UNIT TITLE: From the list of topics included in your yearly plan, you should select one topic. (If you wish to develop your teaching unit from the resource unit you developed in SE 311, you may use the same topic for the teaching unit that you used for the resource unit.)

2. SCHOOL PERIOD: Arbitrarily decide on a specific school period or hour of the day in which the course will be taught, as this may affect the type of activities or rate of speed with which you are able to teach.

3. UNIT DATES: Again, arbitrarily decide on the starting and completion dates for the unit. Some units are better taught at one time of the year than others.

4. NUMBER OF DAYS: Indicate the length of the unit by giving the number of school days required to complete the unit.

Now that you have decided on these four items, WRITE this information using the format which appears in Appendix A, II. Teaching Unit, A. Unit Identification, page A-82. DO NOT continue reading until you do this. When you have completed A. Unit Identification then read on.

(from page 39)

With these essential decisions made, your next step is to determine the unit objectives which we will call SPECIFIC OBJECTIVES. They are more specific than the yearly plan objectives. As you recall, the yearly plan contains general objectives which are listed as abilities and skills, attitudes and appreciations, and knowledge and understandings, which it is hoped will be achieved by the students. Course objectives are broad in scope and denote the expected general outcomes for all of the units studied by the students during the course. We, therefore, must now concern ourselves with the unit objectives which are more specific in nature.

Unit objectives are just as concerned with attitudes, appreciations, and understandings as are the more general course objectives, but for your unit select only those objectives which can specifically be accomplished through the study of the unit materials. In this sense, you would not expect, through the study of this one unit, to achieve all of the course objectives. If you wish to review the discussion on objectives, return to page 26 where it was first presented. For further discussion and additional information on teaching objectives, select any good secondary education "methods" book.

Before you answer the question below determine your specific unit objectives. Remember, unit objectives will serve as guides in selecting material and activities which will lead to the accomplishment of these objectives you will prepare now. State your specific objectives concisely and be consistent in the form used to state them. Check the sample unit, B. SPECIFIC UNIT OBJECTIVES, page A-82, for proper form.

STOP! Have you prepared your unit objectives? If not do so now before going on. If you have done so proceed to the indicated page following the answer you select to the question below.

Objectives determine the progress and direction of the unit work. Though the unit and yearly plan objectives are concerned with the same areas, we find that the unit objectives are (more/less) specific than the yearly plan objectives.

(25) Unit objectives are more specific than yearly plan objectives. Turn to page 42.

(26) Unit objectives are less specific than yearly plan objectives. Turn to page 44.

(from page 35)

19. You selected: Arbitrary distinctions are made to differentiate types of units which are developed under different educational philosophies and curriculum plans. The type of differences are due to the kind of subject matter content and unit activities.

NO, the kind of subject matter doesn't make any difference. All subject disciplines use teaching units which have similar formats. The difference is found in the unit objectives, emphasis on content and type of evaluation.

Return to page 35, reread the panel, and select another answer.

(from page 38)

25. YOUR ANSWER: Unit objectives are more specific than yearly plan objectives.

You are correct! That wasn't difficult, was it? Since the unit is a subdivision of the yearly plan, it seems logical that the unit objectives would be more detailed than yearly plan objectives so that the unit can support the general objectives of the yearly plan.

There are some other considerations to keep in mind when developing a teaching unit. Just as books have a preface, a unit has an introduction. The unit introduction serves the same purposes as the preface to a book. It provides the reader with a preview of the unit. These preliminary remarks in the preface set the bounds within which the book will operate. Likewise, the unit introduction establishes the bounds for class study within the unit.

The types of statements that are included in the introduction of the unit should be the actual remarks that a teacher could make to his class as he arouses their interest in the unit. He shows the students the unit scope, the relationship of this unit to previous and subsequent units, as well as the reason for studying this particular unit within the yearly plan.

Now turn to the sample, II. Teaching unit, "Communication in Everyday Living", C. Unit Introduction, found in Appendix A, page A-83. Read the entire unit introduction to determine the need and reason given for studying communications. Then decide which of the two statements, 27 or 28, you most agree with. Select an answer and turn to the page indicated.

DO NOT READ ANY FURTHER IN THE PROGRAM UNTIL YOU HAVE REFERRED TO THE APPENDIX MATERIAL. Return to this page to answer the question below and proceed as directed.

The need and rationale for studying the total Communications Unit found in Appendix A, as indicated in the unit introduction, is to help students:

(27) learn how and when to communicate business transactions through various communication media for both immediate use in school and future use in the business world. Turn to page 45.

(28) learn how to use and repair various communication media for both immediate use in school and future use in the business world. Turn to page 47.

(from page 36)

24. The teaching unit which is based upon a pre-planned subject matter unit, planned by students and teachers as the unit work progresses, is known as a subject matter unit.

Hold on there! We have just decided that teaching units obtain their titles according to the emphasis which is placed on the subject matter or experience. Also, the subject matter unit is pre-planned by the teacher while the experience unit is student-teacher planned as the unit progresses. Therefore, this could not possibly be a correct answer. Return now to page 36, reread the panel, and select another answer.

(from page 38)

26. You have selected: unit objectives are less specific than yearly plan objectives.

No, this is not true. Since the unit is a subdivision of the yearly plan, the unit objectives will support the yearly plan objectives by dividing the general objectives into more detailed specific purposes. In a relatively short time a small portion of the general objectives can be accomplished through a unit of work.

Return to page 38 and select another answer.

(from page 42)

27. You are very discerning to notice that the need and rationale for the communications unit, as indicated in the unit introduction, is to help students learn how and when to communicate business transactions through various communication media for both immediate use in school and future use in the business world.

Right! The general objectives which you have prepared for the yearly plan will provide the general direction for your work in developing the specific unit objectives and subsequent unit materials for the students. It is necessary to determine the student's background and needs so that the specific objectives may be fulfilled through the classroom activities. It is, therefore, necessary for the introductory section of the teaching unit to include a resume of the activities which you as the teacher can use to fit the unit materials to the students you are teaching.

To provide for individual differences and to "tailor-make" the unit for one's students, the introduction should provide:

(29) a description of the specific objectives which the teacher feels will direct the class work for the unit. Turn to page 49.

(30) a description of activities which will indicate how the objectives will be accomplished during the unit study. Turn to page 46.

(from page 45)

30. YOUR ANSWER: To provide for individual differences and to "tailor-make" the unit for one's students, the introduction should provide a description of the activities which will indicate how the objectives will be accomplished during the unit study.

Correct! The students should be aware of how the unit objectives will be accomplished. Thus, the introduction provides a framework upon which to build. A list of the activities from which the students will be able to choose should also be included in the unit introduction. In this way, the students can select their own activities which will meet their particular needs and interests, thus providing for individual differences.

In addition to providing a framework for the work of this unit, the unit introduction should include a concise description of the relationships of the present unit to all of the other course units, but particularly to the previous and following units, and to other specific subjects found in the secondary school program.

The unit introduction should include an outline of the unit as well as a:

(31) description of the unit evaluation which shows the relationship of the present unit to all other units and to the total school curriculum. Turn to page 48.

(32) description of the relationship of the present unit to all other units and to the total school curriculum. Turn to page 50.

(from page 42)

28. YOUR ANSWER: The need and rationale for the Communications unit, as indicated in the unit introduction, is to help students learn how to use and repair various communication media for both immediate use in school and future use in the business world.

WRONG. To learn to use the communications media IS part of the goal for this unit, but unless the students learn when to use the media it will not serve the need which it is intended to fulfill. To learn to repair various media has no part whatsoever in this discussion. In addition, more of an explanation is needed to answer this question.

Return to page 42 and reread the panel, then select another answer.

(from page 46)

31. YOUR ANSWER: The unit introduction should include a description of the unit evaluation which shows the relationship of the present unit to all other units and to the total school curriculum.

Oh! Oh! You are getting a little too anxious to see this work completed. Though the unit activities should be evaluated to determine if they have accomplished the purposes which they were intended to accomplish, it is a little too early to discuss the evaluation in the introduction.

Go back to page 46 and reread the panel. Then select another answer.

(from page 45)

29. YOUR ANSWER: To provide for individual differences and to "tailor-make" the unit for one's students, the introduction should provide a description of the specific objectives which the teacher feels will direct the class work for the unit.

No, we have already listed our objectives. Now, we are interested in preparing the students so they will be able to accomplish the unit objectives. One way of doing this is by describing the unit activities in which the students will participate. The very nature of the activities will show how the unit work will be mastered and the objectives accomplished. Please return to page 45, reread the panel, and select another answer.

(from page 46)

32. YOUR ANSWER: The unit introduction should include a description of the relationship of the present unit to all other units and to the total school curriculum.

Hurrah! This is true. Without understanding the connection of the new unit to all the rest of the units in the course, the learning experiences merely become exercises which the students may find interesting, time consuming, and perhaps fun. The real purpose for which the unit was developed, however, will be lost and the students will have gained little if they do not see the learning experience in the context of the total secondary school curriculum. If they cannot relate the isolated learning activities to the total educational experience, then one of the major objectives will have been lost.

You are now ready to begin Part II Teaching Unit, C. Unit Introduction in your teaching unit. Your introduction should include the actual introductory remarks (written in narrative style) which the teacher will make to the class, as well as:

a. the need and rationale for studying the new unit;

b. a descriptive list of the unit activities (this may be presented in narrative form, as it is in the sample unit, or as an actual list.)

c. a concise description of the relationships of the preceding and following units and other specific areas of the secondary school curriculum to the present teaching unit.

For a sample of the format for the Unit Introduction, which you may wish to use, turn to the Appendix A, II Teaching Unit, C. Unit Introduction, page A-83.

You will notice that the person who developed the unit introduction in the appendix, included the rationale for studying the unit, the description of the unit activities, and the way the unit material related to other subjects and units in the introductory remark. You may follow this procedure or you may list each of these parts of the unit introduction separately. (See Appendix A, page A-83.)

DO NOT TURN TO THE NEXT PAGE UNTIL YOU HAVE COMPLETED YOUR UNIT INTRODUCTION.

(from page 50)

Just as the apple core is the heart of the apple, the unit core is the heart of the unit. The core of the unit contains the seed of thought which matures into the fruit of the unit, the achievement of its objectives. In your teaching unit the core should include in very brief form the:

a. specific objectives,
b. unit content,
c. unit activities
d. resource materials, and
e. teaching aids.

Though these should be stated briefly, much thought should go into their planning. Perhaps a brief discussion will help you prepare the core of your unit.

As you recall, you have already formulated both the general objectives of your course and the specific objectives of your teaching unit. The specific objectives should be restated in the core of the unit where they are specifically related to a particular day's work. To show that the specific unit objectives are the same objectives as the core of the unit objectives, use the same numbering system in both places. Usually, you will not expect your pupils to achieve more than one or two of the specific objectives on any one day. Furthermore, it may take two or more days to achieve one of the objectives.

With the objectives determined then, the means of accomplishing these objectives must be planned. Actually, the objectives you have selected for your pupils tend to determine the means that you will use. If you want your pupils to achieve skill in typing business letters, you would have the pupils, under your direction, practice typing business letters. In this way they would achieve the established objective. If you had your pupils read about the construction of business letters, the activity would be inappropriate for the objective involved.

Not only do objectives give direction to the teacher as he plans the activities in which he wishes to involve his pupils, but they assist him in the determination of the content, resource materials and teaching aid sections of the core as well.

Objectives stated in the core of the unit aid the teacher in a number of ways. Among them are:

(33) showing directly the relationships of the objectives to the activities which are planned for the achievement of the objectives. Turn to page 55.

(34) involving the pupils in planning for achieving the objectives. Turn to page 53.

(from page 57)

36. OH, OH, you said that the first and most important phase of the unit activity was the developmental phase of the unit. Now, if you will consider a moment, you will realize that the initiatory phase is the first phase even if you don't agree that it is the most important phase. But, if you think another moment, you will understand the logic of saying that the initiatory phase is the most important, for if you do not motivate your students during the early phase of the unit study, they will never develop enough interest and enthusiasm to accomplish very much during the developmental phase of the unit.

Now, return to page 57 and select another answer.

(from page 51)

34. You selected as an advantage of having the objectives stated again in the core of the unit as involving the pupils in planning for achieving the objectives.

No, this is not an advantage. Though you may wish to involve the pupils in planning for class and this may be one of your objectives as stated in the beginning of the unit. It would not be an advantage in any way other than showing the relationship of the activity to the objective.

Now, return to page 51, reread the panel, and select another answer.

(from page 57)

35. Very good! You indicated that the first and most important of the three phases of unit activities would be in the initiatory phase.

Yes, this is certainly true. Not only must it be the first phase as the name implies, but the students must become highly motivated during the initiatory phase of the unit or the real value of the unit will be lost. Without student interest and enthusiasm, the whole unit will be a failure. It is essential, therefore, to motivate the students during the first phase sufficiently so that it will carry over into the succeeding phases.

The second phase of the unit activity is the developmental phase in which the real work of the unit is carried on. Here the activities which the students planned during the initiatory phase of the unit are carried out and accomplished. By its very nature, the developmental phase becomes the longest phase of the unit. It is also the phase when the majority of the objectives of the unit are being sought and the preparation for the culminating phase is being completed.

The longest phase of the unit and the time when the students are busiest on a variety of activities is known as the:

(38) developmental phase. Turn to page 60.

(39) culminating phase. Turn to page 58.

(from page 51)

33. As an advantage of stating the objectives in the core of the unit, you said that the relationship between the objectives and the activities was more clearly shown.

Correct! When the objectives are in front of you it is easier to achieve them because you more easily see what you are trying to achieve in terms of the activities which you propose.

Let us suppose, for example, that you are teaching a group of pupils a unit in United States history on the Revolutionary War. Suppose, also, that you have established as number one-a of your objectives that your pupils will have an understanding of the causes of the Revolutionary War when they have completed their study of the unit. In order to achieve this objective it will be necessary for the pupils to study the political conflicts between the American colonies and Great Britain, as well as the economic rivalry which erupted in the Navigation Acts, the Quartering and Stamp Acts, the Townshend Acts, the Boston Massacre, and the Tea Act.

In the core of the unit, the following core materials might be developed to obtain the objective just stated.

OBJECTIVE	CONTENT	ACTIVITIES	RESOURCE MATERIALS	TEACHING AIDS

In the example on the Revolutionary War we would state the objective, number one-a, and content in this manner:

SPECIFIC OBJECTIVES	CONTENT
1a To understand the political and economic causes of the Revolutionary War.	1. Navigation Acts 2. Quartering and Stamp Acts 3. Townshend Acts 4. Boston Massacre 5. Tea Act Include dates, causes, provisions of the act, political implications, and economic results.

This objective and content material would then lead one to select an appropriate activity which would aid the student in achieving the stated objective.

(from page 55)

SPECIFIC OBJECTIVES	CONTENT	ACTIVITIES
1a To understand the political and economic causes of the Revolutionary War.	1. Navigation Acts 2. Quartering & Stamp Acts 3. Townshend Acts 4. Boston Massacre 5. Tea Act	1. Students divide into five groups each presenting the necessary information about one of the events which led to the Revolutionary War, in one of the following ways: 1. Radio or T.V. show such as "You Were There" 2. A newspaper account 3. A dramatization 4. A panel discussion 5. An illustrated lecture 6. A chalk talk 7. A debate

In order to present certain content in an activity, certain resource materials are necessary. These might include books, charts, maps, periodical articles, pamphlets, or people.

SPECIFIC OBJECTIVES	CONTENT	ACTIVITIES	RESOURCE MATERIALS
1a To understand the political ...	1. Navigation 2. Quartering ...	1. Student presentations ...	1. Art supplies 2. World Book Encyclopedia 3. (Student reference books)

Teaching aids should be included in the lesson plan as they serve the teachers by making the lesson more effective through audio-visual means. All of the items which will be needed for class should be listed to serve as a reminder to the teacher to make the necessary reservations and arrangements. Such items as a film or film strip projector, screen, film, chalkboard, pointer and special materials or "handouts".

SPECIFIC OBJECTIVES	CONTENT	ACTIVITIES	RESOURCE MATERIALS	TEACHING AIDS
1a To understand the ...	1. Navigation.	1. Student presentations..	1. Art supplies 2. World..	1. Tape recorder 2. Chalkboard and chalk 3. Art supplies

(from page 56)

This briefly shows the format established for the Core of the Unit. For additional guidance refer to Appendix A (11-D) page A-86.

The unit activities are usually divided into three phases: (a) initiatory or introductory activities, (b) developmental activities, and (c) culminating activities. Of the three phases the introductory phase is considered the most important, though it will be of relatively short duration. The reason that it is so important is that during the introductory phase the students must be motivated to try to obtain the unit objectives. If they are uninterested then the whole unit may be a failure regardless of the exciting activities or the elaborate evaluation methods planned. In an effort to motivate student interest and to determine and increase readiness for the unit study, a number of approaches (diagnostic testing, discussions, demonstrations, field trips) may be used. During the introductory phase the plans for the rest of the unit, may be made by the students, under the teacher's guidance. The teachers and students may select the activities which will best help them obtain the objectives and satisfy individual differences of the class members.

There are three phases of unit activities. The first and most important phase is the:

(35) initiatory or introductory phase. Turn to page 54.

(36) developmental phase. Turn to page 52.

(37) culminating phase. Turn to page 59.

(from page 54)

39. Too bad, you must have been thinking about something else. The culminating phase is not the longest phase of the unit and the time the students are working on a variety of activities.

If you would consider the meaning of the word culminating, you would realize that it means to climax or conclude. It, therefore, would have to do with the end of the unit when the students are completing the activities which they have been working on all during the unit. The student presentations, as in the example we discussed earlier in the Revolutionary War unit, would certainly not take as long to present as the research which is involved in preparing such presentations. The developmental phase, then, would be the period when the students are developing their presentations or participating in other unit activities which should be much longer than the culminating phase.

Please return to page 54 and select another answer.

(from page 57)

37. OH, NO, you couldn't have selected this answer in anything other than jest. You know that culminating refers to the climax of the unit, this could be correct because it is very important, but it certainly is not the first phase of the unit. Unless the students have become highly motivated during the initiatory phase of the unit the culminating phase will be anything but exciting or even important.

Return, therefore, and select another answer from page 57.

(from page 54)

38. You indicated that the longest phase of the unit is the developmental phase in which the students are busy on a variety of activities.

Yes, you are so right! The culminating activities certainly do not take as long as the developmental activities, just as the presentation of a program seldom takes as long as the preparation for the program takes.

At the agreed time for the completion of the developmental activities, as in the example we have been using of the Revolutionary War unit, the culminating phase begins with the student presentations: reports, dramatizations, displays, panel discussions or debates. The five groups then share their findings from the developmental activities. The culminating activities, then, not only include the student presentations, but also the evaluation of the presentations as well as what the other students have gained from the presentations. Evaluation may take a variety of forms: self-evaluation, evaluation by the students, and teacher evaluation. The evaluational phase of the unit will be discussed at length in a later section.

The phase of the unit activities in which the students present their findings and evaluate them is known as the:

(40) developmental phase. Turn to page 61.

(41) culminating phase. Turn to page 62.

(from page 60)

40. You selected the developmental phase as the phase in which the students presented their findings and evaluated them.

No. We have just discussed the developmental phase and said that this was the phase in which the students are preparing their presentations or carrying on the various activities of the unit. The culminating activities are those which are engaged in at the end of the unit which help to summarize the unit, tying all the threads of thought together, retraining or reteaching skills or understandings which have not been thoroughly understood.

Now, return to page 60 and select the correct answer.

(from page 60)

41. The answer you selected was the culminating phase as the phase in which the students presented their findings and evaluated them.

Now, you have it. This is certainly right. The culminating activities are those activities which the students engage in at the conclusion of the unit. These activities help the students generalize from the specific facts which they have learned during the developmental phase of the unit. Since evaluation is also part of the unit it is a time when the teacher corrects any errors made, clarifies any points which need additional explanation, and generally ties the total unit study together.

With the understanding that you now have of the three phases of unit activities: (a) initiatory, (b) developmental, and (c) culminating, you are now ready to prepare the core of your unit. Prepare at least a ten day, sequential, day-by-day unit core. If you wish, your unit may be longer, but for our purposes you need only PREPARE A 10 DAY UNIT CORE. Indicate: (a) the objectives, (b) content, (c) activities, (d) teaching aids, and (e) resource materials, which you will use in your hypothetical high school course. The suggested format is illustrated in the sample unit found in Appendix A, II. Teaching Unit, D. Unit Core, page A-86, or refer to frame 33, page 55.

DO NOT CONTINUE READING THIS BOOK UNTIL YOU HAVE COMPLETED THE UNIT CORE FOR YOUR TEACHING UNIT. WHEN YOU HAVE FINISHED THE UNIT CORE TURN TO THE NEXT PAGE.

(from page 62)

Everywhere that one turns, materials, practices, and ideas are being evaluated. This is true everywhere in our lives today, but it is particularly true in the classroom. Just as a housewife judges the merit of the meat which she selects for her family, she and her fellow citizens judge the merit of the school. Likewise, the classroom activity needs to be evaluated by its participants - students as well as teachers.

The term evaluation is so comprehensive that it is often misunderstood. Evaluation may be defined as a process of appraising a given individual's personality, performance, or achievement in relation to the stated educational goals. There are many types of evaluation but for our purposes we will discuss three types of evaluation:

1. Student self-evaluation,
2. Teacher self-evaluation,
3. Teacher evaluation of the students.

Three types of evaluation should go on in the classroom:

(42) student, parent, and teacher evaluation. Turn to page 66.

(43) student and teacher self-evaluation, and teacher evaluation of the students. Turn to page 67.

(from page 67)

44. YOUR ANSWER: The purpose of evaluation is to determine the effectiveness of the educational program in relation to the objectives.

Very good! You're right again! If the purpose of the evaluation program was just to determine student grades there would be no need for student and teacher self-evaluation. But, as you stated, the program is for improving the educational offerings.

Self appraisal is one of the most valuable types of evaluation which can be used in the classroom, but it takes great insight and honesty on the part of the individual. With the teachers' aid, students can develop a technique for looking at their own achievement - a form, check list, and the like. The student evaluation sheets should be kept by the student or the teacher and reviewed by both to note any discrepancies between the teacher's and the student's evaluation. A conference between the two should be held to discuss any such discrepancies. It is most important that this type of evaluation be a continuous thing with the student often checking his progress by asking himself "Am I capable of doing better? Am I accomplishing my goals and the unit goals? How am I getting along with my co-workers?" "Did I prepare my report so that it will benefit the class?"

It is just as important for teachers to appraise themselves in terms of how effective they are in helping their students achieve the objectives set for the unit or class period. Some thought should be given to the work that is being done with the individual members of the class as well as the class as a whole. A questionnaire or checklist similar to the one developed by the students could be used by the teacher. There are other barometers which help to measure teacher effectiveness: the student's enthusiasm and interest in class work, student performance on teacher-made and standardized tests, and parents' comments.

Here are two items from a self-evaluational questionnaire found in the sample unit in the appendix, page A-94 which have been devised concerning the use of the telephone.

Can I find numbers in the telephone directory quickly and efficiently?

YES____; NO____; SOMETIMES____.

Do I speak clearly on the telephone?

YES____; NO____; SOMETIMES____.

(from page 64)

Do these questions from a self-evaluation device represent questions from a questionnaire which would be appropriate for a student or teacher to use to evaluate himself?

(46) teacher use. Turn to page 69.

(47) student use. Turn to page 70.

(from page 63)

42. YOUR ANSWER: There should be three types of evaluation which should go on in the classroom: student, parent, and teacher evaluation.

Wouldn't you be upset if you had a parent come into your classroom to evaluate you? Most teachers would be very unhappy if they had parents coming into their classroom for this purpose. Primarily they would feel that parents as laymen have little background for such evaluation. Of course, one can always cite examples where parents have aided the teachers through classroom evaluations. This is the exception rather than the rule, however. It is essential that students and teachers evaluate their own work so that they can improve the classroom learning experiences. Students and teachers alike should be encouraged to evaluate themselves continuously to determine if they are obtaining the goals which they must achieve. In addition, the teacher must evaluate the students' achievement so that he will know how they are accomplishing the stated objectives.

Now, return to page 63 and select another answer.

(from page 63)

43. YOUR ANSWER: There should be three types of evaluation which should go on in the classroom: student self-evaluation, teacher self-evaluation, and teacher evaluation of the students.

Right! These are important areas in classroom evaluation. Evaluation is more than just teacher measurement of the students' knowledge, a testing program or a culminating activity. Evaluation should be an integral part of the total learning process rather than something coming only at the end of the unit of work. Many types of evaluational techniques should be used as some students will be proficient in taking paper and pencil tests while others will be proficient in demonstrating skill in other ways. Thus, students will be given greater opportunity to evidence their achievements. Evaluational techniques should be used to measure areas other than factual knowledge. Such areas as social attitudes, understandings, skills and new interests should be considered when evaluating students, since students may forget facts which they have learned, while attitudes, understandings, and skills will remain a part of them a long time.

It would also be well if students could learn to accept evaluation as an aid to their own learning rather than an attempt by the teacher to penalize them for not doing as well as someone else in the class. In this way, the tensions which are created by the evaluational techniques can be lessened and perhaps eliminated. Therefore, evaluation should provide a method of improving the educational program throughout the unit study, determining the effectiveness of the classroom activity.

The purpose of evaluation is to:

(44) determine the effectiveness of the educational program in relation to the objectives. Turn to page 64.

(45) determine the student grades. Turn to page 68.

(from page 67)

45. Come now, after all we have said you still feel that the purpose of evaluation is to determine student grades? This is certainly a narrow interpretation of measurement, much less evaluation. Surely, with all the elaborate plans which are made for continuous evaluation there is more to it than just student grades. The major purpose of evaluation is to improve the educational offerings which will help the students to learn and subsequently to do better.

Return to page 67 and select a better answer.

(from page 63)

46. Come now, you aren't thinking. You said that this is a questionnaire which the teacher would use. How would he use it? This questionnaire is designed to assist the teacher in appraising his own achievement. If the teacher uses the questionnaire he would be evaluating his own ability to use the telephone--not his student's ability.

When the student answers the questionnaire, it can serve two purposes: (a) the teacher will find it useful in comparing his own evaluation of the student with the student's estimate of his accomplishments, and (b) the student will gain insight into his own strengths and weaknesses.

Please return to page 65 and select another answer.

(from page 65)

47. You're right again! Of course, this questionnaire was devised for the student to appraise his own achievement. The teacher might use the questionnaires after the students have completed them to compare his own evaluation with those of the students. Normally, the teacher would not use the questionnaire first unless he were evaluating his own achievement in this area. Now that you understand the purpose of STUDENT SELF-APPRAISAL (to determine how well your students have achieved the objectives set for the course) prepare a self-evaluation instrument which the students in your hypothetical class could use to evaluate their own success with your teaching unit. Decide on the type of techniques which you will have your students use: rating scales, questionnaires, or check-lists.

Refer to Appendix A, E. Evaluation, 4. STUDENT SELF-EVALUATION, page A-95 for suggested format. DO NOT GO ANY FARTHER UNTIL YOU HAVE COMPLETED AT LEAST ONE STUDENT SELF-EVALUATION TECHNIQUE AND INCLUDE IT IN YOUR TEACHING UNIT.

Secondly, prepare a TEACHER SELF-EVALUATION INSTRUMENT which is relevant to your teaching unit. Indicate the variety of ways in which you will provide for continuous appraisal of your teaching, using the same principles you used for the student self-evaluation instrument.

Note the format in the sample unit, Appendix A, E. Evaluation, 5. TEACHER SELF-EVALUATION, page A-96. DO NOT PROCEED UNTIL YOU HAVE COMPLETED THE TEACHER SELF-EVALUATION INSTRUMENT FOR YOUR TEACHING UNIT.

The third area of interest to us in the evaluation section is a summary of the type of STUDENT APPRAISAL TECHNIQUES, you, as the teacher, will use in evaluating your students throughout the unit of study. How will you determine whether your students have accomplished the objectives established at the beginning of the unit? Briefly outline these measures after you have checked the suggested format found in Appendix A, II. Teaching Unit, E. Evaluation, 1. METHODS OF EVALUATION USED BY THE TEACHER DURING UNIT STUDY, page A-88. DO NOT MOVE ON TO THE NEXT SECTION UNTIL YOU HAVE COMPLETED YOUR OUTLINE.

The next item for us to prepare is number three, REPORTS TO PARENTS. The teacher, of course, must comply with school regulations regarding reports to parents. However, for the purposes of your unit, briefly indicate how your students' performance will be reported to the parents, especially in those instances where students' performance deviates considerably.

(from page 70)

Refer to Appendix A, E. Evaluation, E. REPORTS TO THE PARENTS, page A-94. DO NOT PROCEED UNTIL YOU HAVE FINISHED THIS SECTION.

The last type of appraisal which we are concerned with is the TEACHER'S EVALUATION OF STUDENT'S ACCOMPLISHMENTS. You have previously mentioned the various methods which you will use to evaluate your students. Now we will discuss the preparation of such an instrument. For our purposes, such evaluation techniques may include essay and objective tests. (In the event that the content of your unit is such that additional evaluation techniques are needed you may wish to include: anecdotal records (recording explicitly the actual behavior), rating scales (performance appraisal, i.e. presentation of a report or skill), and behavior inventories (records of books read and movies seen).

Do not prepare your essay or objective tests until you have read the next section of the program. Do not turn to the next section, however, until you have completed your evaluation instruments or description of the methods of evaluation for:

1. Student self-evaluation;
2. Teacher self-evaluation;
3. Reports to parents.

When you have completed the above items then turn to page 73 for additional discussion on essay and objective tests.

The traditional type of evaluation has been the essay and objective test. They still play an important role in evaluation, but, all the emphasis should not be placed on essay and/or objective tests to the exclusion of a variety of other types of appraisal practices. Though neither type of test is completely satisfactory alone, the teacher should use both essay and objective tests taking advantage of the strength of both types of tests.

Objective tests refer to tests which usually have one correct short answer and appear in such forms as: true-false, multiple choice, and completion. The scoring of the questions becomes a routine clerical task which can be done quickly by an electrical test-scoring machine or manually by a key.

No single test can evaluate all the objectives which the teacher and students are trying to obtain through the unit study. One type of measurement, however, which samples unit information widely and will provide quick results with uniform answers is the:

(48) essay test. Turn to page 73.

(49) objective test. Turn to page 74.

(from page 71)

48. Better luck next time! You selected the essay test as the one which provides quick results with uniform answers. If you think a little more you'll realize that the essay test could not possibly be a quick method of scoring because the organization and wording will vary with each individual, thereby having anything but uniform answers.

Please go back to page 71 and select another answer.

(from page 71)

49. You're getting smarter all the time! Yes, the objective test is the type of test which will usually provide one correct, short answer which shortens the time required for grading.

Essay tests are defined as free-answer tests in which the student's ability to recall information and to organize it into a logical answer with varying degrees of completeness and accuracy, is appraised. A limitation is the small number of questions that can be answered in the time allotted.*

It is often advocated that a complete teaching unit contain a section devoted to possible evaluation procedures. Subsequently, such a section will be included in your unit. Unless the technique of evaluation which you intend to pursue is quite different from the conventional technique it is unnecessary to include a total test of any one type of item, i.e., true-false or multiple choice.

Now prepare a Unit Test to be included in your teaching unit as illustrated in Appendix A, page A-90. Each unit should include:

1. A sample unit test with at least five of each of the following test items:

    a. Essay
    b. Completion
    c. Matching
    d. Multiple choice
    e. True-false

---

* The purpose of this program is not to teach evaluation methods, but rather to provide a guide for items which should be included in the evaluation section of your teaching unit. For a more detailed discussion of testing, turn to any good reference on evaluation and measurement such as:

Inlow, Gail M., Maturity in High School Teaching, 1963, Chapters 12, 13 and 14.

Grambs, Jean D., William J. Iverson, and Franklin K. Patterson, Modern Methods in Secondary Education, 1958, pages 466-514.

You should also use the ideas presented by your instructor as he discussed evaluation procedures with your class.

(from page 73)

2. directions for administering and scoring each section of the test (see page A-89).

3. a sample answer sheet and scoring key. (See page A-93).

The entire evaluation section (E) will be complete when the unit test is finished. See Appendix A, II. Teaching Unit, E. Evaluation, page A-88 for suggested format.

Turn to the next page.

(from page 74)

Except for your lesson plans the only remaining assignment for your unit is the preparation of a bibliography of the materials to be-used in the unit. As you know, a bibliography is a list of books or periodicals which pertain to a given subject. The proper identification of the references are given for students interested in finding additional information. The bibliography should include: the author's last name, first name, title of the book (underlined), city of the publisher, publisher's name, and the year the book was published. The format illustrated in Appendix A, page A-99 may be used as a guide. If your book references deviate from the information given here, check the sample unit for other types of entries. If you need additional help in writing your bibliography, refer to a good standard reference, such as Campbell's Form and Style in Thesis Writing.

Your bibliography should include books and periodicals which will serve as references for teacher planning, as well as for slow, average, and superior students. You may wish to include such material as poster and bulletin board suggestions, resource persons, films or slides, and companies which distribute free or inexpensive materials.

You should select those references which will be of assistance to the teacher and student in successfully studying the unit, however, include only those which you actually expect to use. Prepare your bibliography now. When it is finished, turn to the next page.

(from page 75)

CHAPTER 4.

It is the objective of Chapter 4 to enable the prospective teacher to prepare a daily lesson plan using the material from the teaching unit.

Turn to the next page.

(from page 76)

The last part of your teaching unit will include a sample of five daily lesson plans taken from the content and activities presented earlier in this unit. Since we are interested in having you learn the technique for constructing lesson plans we are asking you to prepare a sample of five lessons from your teaching unit. The unit plan provides the framework for daily planning, but it does not eliminate the need for it. The daily lesson plan will differ from day to day, providing a tentative agenda for the class and a set of notes for the teacher. The daily plan then includes a specific set of activities planned to achieve the objectives of a specific day and class.

In light of the decisions made earlier concerning your yearly plan and unit plan prepare five daily lesson plans using the format illustrated in Appendix A, III. Lesson Plans, page A-105. Include the following items:

1. IDENTIFICATION: Arbitrarily decide on the information which should appear in the identification.
   a. Instructor (your name)
   b. Class (General Business)
   c. Unit (Communications for Everyday Living)
   d. Date (March 16, 1967)
   e. Time (Second Period, 9:35-10:30 a.m.)
   f. Room (105)

2. OBJECTIVES: What specific aims pertain to this particular day's plan?

3. PREPARATION: With what activities should the teacher be familiar? What materials should the teacher gather and prepare before the class begins?

4. PRESENTATION: What items should be included in the lesson? In what order will they be presented? Also list the times various activities will take place.

5. EVALUATION: What techniques of evaluation will be used by both teacher and pupils during this class period?

6. ASSIGNMENT: What individual and group work assignments are necessary to complete the learning experience both in and out of class?

(from page 77)

7. ADJUSTMENT: What specific suggestions for adjusting the proposed class procedure can you make to help the class function more smoothly if there is too much or too little time at the end of the class period?

8. REMARKS: What would have made the class proceed more smoothly? After class write any comment or reminder which should be kept in mind for future use. Indicate how well the class achieved the objectives and what might be done differently next time so the objectives can be reached more adequately.

There are two formats given in Appendix A for daily lesson plans. You may use either format. Prepare five daily lesson plans.

When you have completed the five daily lesson plans, your next step is to check your teaching unit with the teaching unit outline, check list. (Appendix C. page C-110.) Compare the teaching unit materials which you have prepared with this check list. If you have all the items listed in the check list, you are ready to have your teaching unit evaluated. Submit your completed teaching unit to your instructor for evaluation no later than ____________________ (the date will be determined by your instructor).

APPENDIX A

THREE LEVELS OF PLANNING FOR A UNIT OF STUDY, THE YEARLY PLAN, THE TEACHING UNIT AND THE DAILY LESSON PLAN

I. YEARLY PLAN

A. IDENTIFICATION

1. SUBJECT FIELD: Business Education
2. SPECIFIC SUBJECT: General Business
3. COURSE TITLE: General Business
4. GRADE LEVEL: High School freshmen
5. PREREQUISITES: none
6. SCHOOL PERIOD: five 55-minute periods per week, second period
7. COURSE DURATION: two semesters
8. STUDENT AGE RANGE: thirteen to fifteen years old
9. CLASS SIZE: twenty-five students
10. STUDENT INTELLECTUAL CAPACITY: 100 to 125 I.Q.

B. GENERAL OBJECTIVES

1. KNOWLEDGE AND UNDERSTANDINGS TO BE DEVELOPED:
    a. To acquire basic information about general business practices.

    b. To develop understanding of the various practices involved in general business.
2. ABILITIES AND SKILLS TO BE DEVELOPED:
    a. To develop skills that make life easier and happier for all citizens in relation to personal business.

b. To provide an introduction which will survey the abilities and skills needed for vocational participation in general business occupations.

c. To improve skills in the foundation areas of education.

3. ATTITUDES AND APPRECIATIONS TO BE DEVELOPED:

a. To improve appreciations of the skills required to carry on the general business vocations.

b. To improve attitudes which will result in greater work efficiency and economy of time.

c. To develop vocational interests.

d. To develop an appreciation for the cultural impact which has stemmed from modern business practices.

C. COURSE CONTENT (as indicated by unit titles)

1. Introduction
2. Using Banking Services
3. Planning Your Spending
4. Using Credit Widely
5. Sharing Economic Risk (Insurance)
6. Making Useful Savings (Investments)
7. Travel Services
8. Communication for Everyday Living
9. Transportation and Shipping Services
10. Keeping Personal Records and Information
11. Our Business and Economic World

II. TEACHING UNIT

A. UNIT IDENTIFICATION

1. UNIT TITLE: Communication for Everyday Living
2. SCHOOL PERIOD: Second period, 9:35-10:30 a.m.
3. UNIT DATES: March 15, 1967 to April 1, 1967
4. NUMBER OF SCHOOL DAYS THE UNIT WILL COVER: 15 days

B. SPECIFIC UNIT OBJECTIVES

1. KNOWLEDGE AND UNDERSTANDINGS TO BE DEVELOPED:
    - a. To understand how the communications unit fits into the total curriculum, business education courses and the general business course in particular.
    - b. To acquire basic information about communication services.
    - c. To learn to make wise choices of communication services in the light of such factors as speed, cost, and probable time of delivery.
    - d. To understand the evolution and classification of the various types of communications and the role of communication in modern business.
2. ABILITIES AND SKILLS TO BE DEVELOPED:
    - a. To be able to engage in business telephone conversations with ease and assurance of proper telephone techniques.
    - b. To be able to prepare an acceptable business letter.
    - c. To be able to place long distance calls by station to station and person to person.
    - d. To be able to identify the different classes of mail and mail services.
    - e. To be able to use a large city telephone directory quickly and efficiently.

f. To improve skills in giving and listening to oral reports.

g. To be able to send and receive telegrams.

h. To be able to compute charges given rate cards for various communications services.

3. ATTITUDES AND APPRECIATIONS TO BE DEVELOPED:

a. To be able to appreciate the life work of Alexander Graham Bell.

b. To be able to appreciate the mass communication systems role in modern America, general business.

c. To be able to appreciate the effect of mass communication on the individual's life.

C. UNIT INTRODUCTION (suggested narrative for the teacher)

Class, what if I were to ask you to refrain from using the telephone for three days -- to deliver messages in person or via a runner. Pretty drastic for most of you, I imagine! Also, quite inconvenient, too. For the next three weeks, we shall be talking about various means of communication. We shall list these in a short time.

We'll be concerned primarily with the communications related to the business world. Our goal is to learn HOW and WHEN to use the telephone, telegraphic services, and the mail services. In addition, we shall discuss some other methods of communication such as advertising, radio, television, to mention a few.

Perhaps we should talk for a moment about our targets for this unit on communications. As usual, I have prepared for each of you a copy of the targets. You know from past experience that these objectives list specifically what you should know and be able to do. Save this sheet as a skeleton outline of the course. It will help you prepare for quizzes and the unit test.

(WITH THE CLASS READING SILENTLY, THE TEACHER READS ALOUD THE OBJECTIVES ON THE PRECEDING TWO PAGES.)

INTERRELATEDNESS

Now that the framework for this unit is established, let's see how the communications unit ties in with every other unit in the text. For example, in our last unit on "Travel Services" we decided it was a good idea to write in advance for accommodations, didn't we? -- especially during the tourist season. Now, we shall learn HOW to write this letter and many other types of letters in an acceptable business form. The same is true of use of the telephone and telegraph.

As a preview, I'll tell you how communications will help you in the next unit of study which will be "Transportation and Shipping Services". Jerry's dad does not travel to New York each time he wants to buy something manufactured in that part of the country -- or Suzie's uncle doesn't go to Hawaii to get his orchids for the flower shop. It would be nice if businessmen could do this each time -- but who would run the business? We know that goods are shipped by truck, plane, boat, train, pipeline -- to mention a few of the more common ones. Communication must take place between Jerry's dad and Suzie's uncle to make certain that the goods are: (1) the right merchandise, (2) in the right quantity, (3) delivered at the right time, (4) delivered to the right place.

It may seem funny, but it is no joke when Suzie's uncle orders 50 dozen white and 50 dozen green carnations for the Emerald Isle Ball on St. Patrick's Day (THIS INTRODUCTION IS GIVEN ON MARCH 15 WHEN THE UNIT BEGINS) and he receives 25 dozen red roses and 25 dozen white roses. Faulty communications MAY have been the reason for the mix-up.

Now, so much for the business aspect -- how will this communications unit help you in your overall education. Let's just list a few on the board as we see how ----

Mathematics -- solving problems of rates.

Reading -- the text, checklist questions, readings, etc.

Writing -- letters, outlines, other written assignments.

Spelling -- business as well as general terminology.

Vocabulary -- business terminology used in everyday living.

Oral Expression -- oral reports, debates, panel discussions.

This unit will tie in with some of your other subjects. (TEACHER WRITES THE SUBJECTS ON THE BOARD AND COMMENTS BRIEFLY)

History -- the evolution or growth changes of communication methods from the stone age on.

English -- the composition and correctness of communications; vocabulary.

Art -- the illustratory nature of impersonal communication -- such as advertising.

Geography -- the understanding of time zones and how they affect communications; communications in the different parts of the world.

One interesting sidelight is that Mr. Shores from the school newspaper has asked you to write an ad for the school newspaper. It is to be strictly copy -- this means all words and no art work. Communicating the right words, then, is IMPORTANT. We'll talk about the ad when we get to the topic on advertising!

Now, keeping our targets in mind, let's begin by having you do something. Take out a scratch piece of paper and a pencil and list what you remember to be some of the various means of communication. This will serve as a summary or review of the last 10 minutes. Divide your list into two sections -- personal and impersonal.

UNIT CORE

SPECIFIC OBJECTIVES	CONTENT	TEACHING ACTIVITIES	TEACHING AIDS	RESOURCES
1st day . .	. . . .	. . . .	. . . .	. . . .
1a. To understand how the communication unit fits into the General Business course work. 1c. To understand the evolution and classification of the various types of communication.	1. Introductory remarks-types, need for, uses of comm. 2. Methods of communication: a. Telephone b. Radio c. T. V. d. Newspaper e. Business letter 3. Classification of communication a. Personal b. Impersonal 4. Film: "Story of Communication"	1. Teacher-led discussion, recording student comments on the chalkboard on means of communication and 2 major classifications of communication. 2. Discuss how to watch a film effectively 3. View film 4. Teacher directed question and answer period about content of film. 5. Assign two oral reports a. Alexander Graham Bell b. Uses of the telephone directory and the advantages of same.	1. Chalkboard 2. Chart: "Two Classifications of Communication" 3. Bulletin board display of various means of communication 4. Film 5. Film projector and screen	1. Film: "Story of Communications", Encyclopedia Britannica 2. Accompanying film guide 3. A Directory of Film Evaluations for Teachers of Business Subjects, Kappa Chapter,
2nd day . .	. . . .	. . . .	. . . .	. . . .
3a. To improve appreciation of the inventor of the telephone. 2e. To acquaint the student with the telephone directory, how to use it, and the purposes of it.	1. Life and work of Alexander Graham Bell. 2. Telephone directory.	1. Review procedures of note taking and oral report standards. 2. Oral report on Bell a. Discuss report content b. Discuss report presentation 3. Oral report on the	1. Picture of Alexander Graham Bell 2. Telephone directories 3. Chalkboard	1. Telephone directories

UNIT CORE CONTINUED

SPECIFIC OBJECTIVES	CONTENT	TEACHING ACTIVITIES	TEACHING AIDS	RESOURCES
2f. To improve skills in giving and listening to oral reports.		telephone directory (repeat 2. a and b)		
3rd day . .	. . . .	. . . .	. . . .	. . . .
1. To learn how to place telephone calls correctly. 2. To improve a telephone personality. 3. To improve voice control on the telephone. 4. To improve panel presentation skills.	1. Step-by-step directions for placing a telephone call: dial, manual; panel on placement of emergency calls. 2. Tips for voice control 3. Factors of good telephone personality 4. Film: "Your Tell-Tale Voice"	1. Present chart on how to place calls both manually and by dial. 2. Present poster with tips for voice control. 3. Student panel on emergency calls--use roll playing 4. Show film: "Your Tell-Tale Voice" 5. Assignment: read "Telephone Courtesy" which will introduce film to be shown tomorrow.	1. Chart: "How to Place Calls: Manually & By Dialing" 2. Poster: "Tips on Voice Control" 3. Table & chairs for panel discussion 4. Model or actual dial and manual telephone for demonstration by the teacher. 5. Pamphlets: Telephone Courtesy 6. Film and projector	1. Crabbe, General Business 2. Film: "Your Tell-Tale Voice", American Telephone and Telegraph Co. 3. Telephone Courtesy (pamphlet) Bell Telephone Co. 4. Enterline, Herman G., "Using Discussion Techniques in Teaching General Business", The Balance Sheet , Cincinnati: Southwestern Publishing Company, October, 1955.
4th day . .	. . . .	. . . .	. . . .	. . . .
1. To increase business vocabulary 2. To improve the ability to question intelligently, particularly based on class presentation.	I. Vocabulary words page 372. 2. Review notetaking 3. Review etiquette for guests.	1. Quiz (unannounced) on vocabulary and pamphlet assigned for homework. 2. Discuss questioning notetaking, etiquette rules for guests	1. Quiz dittoed for vocabulary and information in pamphlet. 2. Room arranged for guest speakers	1. Crabbe, General Business 2. Harms, Harm and Stehr, B.W., Methods in Vocational Business Education

E. EVALUATION

1. METHODS OF EVALUATION USED BY THE TEACHER DURING UNIT STUDY

a. Assessing student abilities prior to unit study

  1) Inventory test - determine knowledge

  2) Write a letter, with necessary information given for uniform content - determine ability to write in correct form and to express ideas

  3) Problem situations which test discrimination and analysis power of the student

  4) Vocabulary words necessary for common understanding of communications unit, defined, written or oral

b. Evaluation of Homework

  1) Correctness

  2) Neatness

  3) "Punctualness"

c. Evaluation of Essay Test

  1) Knowledge of the subject matter

  2) Spelling

  3) Punctuation

  4) Grammar

  5) Organization

  6) Sentence construction

  7) Use of business vocabulary

d. Evaluation of "Plus" Factors

  1) Cooperation with other students

  2) General work habits and efficiency

3) Ability to follow directions

4) Effectiveness as an individual worker

5) Display of some effort to obtain the material

6) Acceptance of responsibility

7) Carrying through

2. DIRECTIONS FOR ADMINISTERING THE COMMUNICATIONS UNIT TEST

a. The test will be duplicated and distributed to students at the beginning of the class period.

b. The entire class period will be devoted to the administration of the test.

c. The students shall answer all test questions directly on the test sheets.

d. No student questions shall be answered after the students have begun working.

e. Any student caught cheating will turn in his test sheets and earn a grade of zero.

f. There shall be no talking while the test is in progress.

COMMUNICATIONS FOR EVERYDAY LIVING UNIT TEST

I. DIRECTIONS: If the statement is TRUE, print "TRUE" on the blank space provided to the left of the question; if the statement is FALSE, print "FALSE" on the blank space provided to the left of the question.

______ 1. A handwritten business letter should be written on lined paper.

______ 2. A day letter may be sent any time during the day or night.

______ 3. The distance the message is sent has bearing on the cost of a day letter.

______ 4. Night letters are delivered any time during the night.

______ 5. Mass communications help to create markets for goods and services.

______ 6. Telegraph messages may be sent collect.

______ 7. One company provides telephone service to the entire United States.

______ 8. Subscribers buy the equipment that is installed to provide them with telephone service.

______ 9. The paragraphs in a business letter should be shorter than those in other written material.

______ 10. All words used in the complimentary close of a business letter are capitalized.

______ 11. The name of the sender is counted in figuring the cost of a telegram.

______ 12. Smoke signals are a form of communication.

______ 13. Writing "City" when the letter is to be delivered in the same town that it is mailed is sufficient to indicate the city of the recipient.

II. DIRECTIONS: Place the word or words that most appropriately or correctly completes the statement on the blanks provided.

1. Such methods of communication as radio, telephone, and newspapers are called ____________ communications.

2. The greeting in a letter is called the ____________.

3. A long-distance call to a particular individual is a ____________________ call.

III. DIRECTIONS: In the blank space provided to the left of Column A, write the capital letter before the word or words in Column B that most nearly or best fits the definition in Column A. Each may be used only one time.

____ 1. The swiftest means by which a written message can be sent.

____ 2. Developed the camera tube for television.

____ 3. The telegraph media to use when the firm to receive the message has already closed for the day.

____ 4. Inventor of printing from movable type.

____ 5. A service of the telephone company that makes it possible for more than two people to converse together at one time.

A. Philo Farnsworth

B. Thomas Edison

C. telephone

D. conference call

E. full-rate telegram

F. cablegram

G. night letter

H. Johann Gutenberg

I. party line

IV. DIRECTIONS: Based on our discussion in class, list the four main things that determine the method of communication used.

1. ____________________________
2. ____________________________
3. ____________________________
4. ____________________________

V. DIRECTIONS: Each of the following incomplete statements is followed by four possible answers. For each item select the ONE answer that BEST completes the statement and mark that capital letter in the space provided. For math problems, show your work to the right side of the selections.

1. The correct way of asking the telephone operator for Main 3000 is to say ______________.

   (A) "Main three-oh-oh-oh"
   (B) "Main thirty-hundred"
   (C) "Main three-thousand"
   (D) "Main thirty, double-oh"

2. Telegraph messages given fast, but deferred, service are known as ______________.

   (A) day letters
   (B) telegrams
   (C) night letters
   (D) money orders

3. The slowest telegraph service is a ______________.

   (A) day letter
   (B) night letter
   (C) full-rate money order
   (D) telegram

4. The long distance telephone rate for three minutes between two cities is \$1.20. If each additional minute costs 50 cents, a six-minute conversation will cost ______________.

   (A) \$2.70
   (B) \$2.00
   (C) \$2.20
   (D) \$3.70

VI. DIRECTIONS: Answer the following question in essay form. Your use of grammar, punctuation, penmanship, spelling, and organization will be considered in scoring as well as the quality of the content.

How does communication serve you everyday?

KEY -- COMMUNICATIONS UNIT TEST

I. 1. False
2. True
3. True
4. False
5. True
6. True
7. False
8. False
9. True
10. False
11. False
12. True
13. False

II. 1. mass
2. salutation
3. person-to-person

III. 1. E
2. A
3. G
4. H
5. D

IV. 1. time
2. cost
3. convenience
4. speed

V. 1. C
2. A
3. B
4. A

VI. Below are some key points. The student should be able to name or discuss about three-fourths of these suggested answers.

Almost instant communication
Neighbors in all parts of the world
World has become smaller
Communications to warn of dangers such as approaching fires
Communications as a means of friendship
Speed of getting the message to another
Weather forecasts and news events made known to everybody
Aids in securing goods from all parts of the world
Replacement parts dealer does not have on hand can be secured quickly and easily
Facts provided daily through newspapers, magazines, radio, and television
Pleasure from mass communications -- such as radio and television
Mass production possible because of mass distribution related to mass communication -- advertising
Base of communication

ANY OTHER ACCEPTABLE ANSWERS WILL LIKEWISE RECEIVE ONE POINT CREDIT, TOO.

3. REPORTS TO THE PARENTS

The teacher, of course, must comply with school regulations regarding reports to parents. At the secondary level, the usual report from the general Business teacher to the parents would be some letter or number grade (A, B, C, D, F, OR 1, 2, 3, 4, 5, etc.) recorded each school marking period. For the most part, this is the extent of reports from teachers to parents.

Teachers should contact parents as well as assign grades to their children. Perhaps during the year, he could have a conference with the parent or parents, OR write a short note, OR telephone each student's parents. He could discuss strong and weak areas, note the progress they were making, and answer any questions parents might have.

If it is impossible to use the suggestions given for each student, then at least the parents of the exceptional child (both superior and slow students) should be contacted.

For example, if Allan enjoys writing business letters and produces exceptionally good work, perhaps this is an indication of greater avenues open to him in the writing or business field. Then, too, parents should know how an A was earned: just barely, through constant plugging, time and effort; because of exceptional ability not requiring a great amount of effort on the part of the student.

To summarize, then, in reporting to parents, the teacher should work with the policies set by the school; and if he chooses to embark on some additional method, he should clear this with the school administration.

4. METHODS OF EVALUATION USED BY THE STUDENT

The goal of evaluation is self-evaluation. A student's self-analysis of his communication abilities is probably the most meaningful to him--provided that the self-evaluation is honest, accurate, and impartial as possible. One way to help students achieve this self-evaluation is to have each student keep his own file of his work completed in the communications unit. Then each student can evaluate his own improvement in writing essays, answering quizzes, decision-making, and whatever else has been assigned.

Other than simply looking over the materials as described in the paragraph above, the student can evaluate communication abilities through the use of a checklist. For example, in self-evaluation of use of the telephone the student can ask:

Can I find numbers in the directory quickly and efficiently?
YES____; NO____; SOMETIMES____

Do I speak clearly on the telephone? YES____;
NO____; SOMETIMES____

Carrying out the above example, one could include all of the pertinent ideas regarding effective use of the telephone. If the student sees the value in a specific checklist like this, it will be a valuable tool for him; it will tell him specifics. It will show him his strong and his weak areas.

Weak areas. That brings to mind another point. Once the student has discovered his weak areas -- what next? Part of the evaluation process is the self-improvement plan. Continuing with our telephone example, the individual, with some help from the teacher, can "concoct" his own remedy. If the student does not speak clearly, he can practice recording his voice on the tape recorder, play the recordings back, note improvement, and try again. In giving oral reports, the student who forgets to gesture, use eye contact, etc. can practice in front of a mirror thereby noticing his lack of showmanship.

You, the reader, are now near the completion of the student evaluation process. The student has looked over his work, used a checklist guide, discovered his weaknesses, and is ready for the final evaluation. What evidence is there that the student has profited from self-evaluation? Here are a few guidelines. Has the student:

Increased self-insight.

Ability to APPLY ideas learned in this unit to personal and business transactions

Attitude toward various types of communications

5. TEACHER SELF-EVALUATION

Evaluation used by the teacher need not center around the student to the exclusion of all else. As a starter, the teacher in the self-evaluation process should ask:

> Are students able to understand my presentations?
>
> Do the students find my presentations interesting?
>
> Based on my presentations, are the students able to see the significance of communications?
>
> Am I helping to improve each student in some way regarding his communication abilities?

The above four questions are an overview of the highlights that the teacher is anxious to discover.

To learn more details, the teacher can give his students a questionnaire to be returned to the teacher completed but unsigned. Taken from pages 168 and 169 of the SE 411 Syllabus.

TEACHER-APPRAISAL SCALE

Encircle the letter before the statement which in your estimation best completes the idea according to your appraisal of your teacher. Please do not sign your name nor make any mark that can identify your paper.

PERSONAL APPRAISAL

1. KNOWLEDGE OF SUBJECT
   With regard to knowledge of the subject, I would say the teacher:
   a) Knows it very well. b) Knows it well. c) Does not know it very well. d) Knows it poorly.
2. SENSE OF HUMOR
   I believe the teacher:
   a) Tries too hard to be humorous. b) Has a keen sense of humor. c) Is sometimes humorous. d) Is far too serious.
3. PRESENTATION
   I would say in relation to my other courses, this course was:
   a) Very well presented. b) Well presented. c) About average. d) Poorly presented. e) Very poorly presented.
4. STUDENT-TEACHER RELATIONSHIP
   a) A cordial and cooperative feeling prevails. b) Neither good-will nor antagonism prevails. c) The teacher tends to antagonize the students.

5. SELF CONFIDENCE
I believe the teacher is:
a) Usually sure of himself. b) Fairly self-confident.
c) Usually uncertain.

6. ATTITUDE TOWARD STUDENTS
I believe the teacher in dealing with students is:
a) Always considerate and courteous. b) Usually considerate and courteous. c) Sometimes inconsiderate and discourteous.
d) Always inconsiderate and discourteous.

7. INTEREST IN STUDENTS
I believe the teacher in dealing with students shows:
a) Great interest in student's problems. b) Average interest in student's problems. c) Little interest in student's problems.

8. ANSWERING QUESTIONS
I believe when questions are asked in class the teacher:
a) Answers them fully and directly. b) Answers them partially.
c) Evades the question. d) Does not answer them.

9. EXPLANATIONS
I find the teacher in explanation of difficult material is:
a) Very clear. b) Clear. c) Not very clear.

10. ATTITUDE TOWARD DIFFERENCES
I believe the teacher:
a) Recognizes and allows differences of opinion. b) Is usually tolerant, but is biased. c) Does not recognize nor allow differences of opinion.

ASSIGNMENTS AND EXAMINATIONS

1. ASSIGNMENTS
I would say the teacher in making assignments is:
a) Always definite. b) Definite. c) Indefinite. d) Very indefinite.

2. EXAMINATIONS
I believe that examinations in this class should be given:
a) More often. b) As frequently as they were. c) Less often.

3. EXAMINATION QUESTIONS
I think the questions on the examinations were:
a) Very clear. b) Clear. c) Ambiguous.

4. FAIRNESS OF EXAMINATIONS
I think the examinations were:
a) Very fair. b) Fair. c) Not very fair. d) Very unfair.

5. FAIRNESS IN GRADING
I think the teacher:
a) Is very fair and impartial to all. b) Occasionally shows favoritism. c) Constantly shows favoritism.

COURSE APPRAISAL

1. COURSE
   I would say in relation to my other courses this was:
   a) Very difficult. b) Difficult. c) Average. d) Easy. e) Very easy.
2. HOMEWORK
   I would say in relation to my other courses this course required:
   a) More preparation. b) About the same preparation. c) Less preparation.
3. ENJOYMENT
   I would say that this course in relation to my other courses was:
   a) Very enjoyable. b) Enjoyable. c) Average. d) Dull. e) Very dull.

TEACHER RANK

With relation to other teachers I have had, I would rate this teacher in the:
a) Top ten per cent. b) Upper quarter. c) Upper half. d) Lower half. e) Lower quarter.

F. BIBLIOGRAPHY

1. REFERENCES FOR THE TEACHER

a. PAMPHLETS:

Each student will receive the following pamphlets for exploratory reading. If it is not possible to secure this many, then the teacher will have several of each on reserve for the students to use in the room or to check out and take home.

Eyes and Ears for the Millions; Westinghouse Electric Corporation, 306 Fourth Avenue, Pittsburgh, Pennsylvania.

Magic of Communications, The; Bell Telephone

Telephone Courtesy; Bell Telephone

Telephone in America, The; Bell Telephone

Telephone and How We Use It, The; Bell Telephone

Story of Western Union, The; Western Union Telegraph Co.

b. BUSINESS SOURCES:

The following business sources provide free and inexpensive teaching materials for the General Business teacher teaching the communications unit. Each year, write these sources for new materials that they have published. Because they specialize in communications, you are sure to receive current information.

Corrigan Communications, Inc., 1111 East Ash, Fullerton, California, Attention William R. Deutsch, Director of Programming Services.

Center for Mass Communications of Columbia University Press, New York 25, New York, Attention M. J. Bours, Business Manager.

A. B. Dick Company, 5700 West Touhy Avenue, Chicago 48, Illinois, Attention Frank Stedronsky.

Other sources for the teacher, although not exclusively for the General Business teacher teaching the communications unit are:

Bibliography of Teaching Aids, American Forest Products Industries, Inc., 1816 N Street, NW, Washington 6, D.C.

Free and Inexpensive Business Education Material, South-Western Publishing Co., Cincinnati, Ohio.

Materials for Business Education Teacher, Gregg Publishing Division of McGraw-Hill Book Company, Inc., New York.

c. VISUAL AID GUIDES:

The teacher will use these sources to check on evaluations of visual aids.

A Directory of Film Evaluations for Teachers of Business Subjects. Prepared by Kappa Chapter, Delta Pi Epsilon, University of Michigan, Ann Arbor. Issued by Instructional Materials Lab, Vocational Education Departments, School of Education.

Specific Visual Aids for Courses in Business Education. Prepared by Howard L. Haas, Business Education Department, New Jersey State Teachers' College, Patterson, New Jersey.

d. PROFESSIONAL EDUCATIONAL TEXTBOOKS:

The teacher is never too old or too experienced to refer to a college text.

Harms, Harm and Stehr, B. W., Methods in Vocational Business Education, Cincinnati: South-Western Publishing Co., 1963.

Tonne, Popman, and Freeman, Methods of Teaching Business Subjects. New York: Gregg Publishing Division of McGraw-Hill Book Company, Inc., 1957.

e. PUBLISHED TESTS:

To give the teacher an idea of testing on the communications unit, she can obtain published tests to guide her in preparing tailor-made tests for each of her classes. Teachers may obtain tests from:

South-Western Publishing Company

Gregg Publishing Division of McGraw-Hill Book Company, Inc.

f. SPECIFIC ARTICLES IN PERIODICALS:

MacKeachie, M. J. "Student-Centered Vs. Instructor-Centered Instruction," Journal of Educational Psychology, March 1954, pp. 143-150.

Enterline, Herman G. "Using Discussion Techniques in Teaching General Business," The Balance Sheet. Cincinnati: South-Western Publishing Company, October 1955.

Kuhns, Caroline. "Role-Playing in Classroom Situations," Business Education Forum, May 1959, pp. 30-31.

Tonne, Herbert A. "Evaluation in the Social-Business Subjects," Business Education Forum, March 1953.

"Work-Habits Check List Is an Improver." Treasure Trove -- Tricks of the Trade, Gregg Division, McGraw-Hill Book Company, p. 10.

Musselman, Vernon A. "Motivating General Business Through Varied Pupil Activities," Business Teacher, March/April, 1963.

g. FILMS AND FILMSTRIPS:

The teacher will secure the following films to show in this communications unit. Arrangements should be made well ahead of actual scheduled time.

A Manner of Speaking, American Telephone and Telegraph. Businessman trapped in a rainstorm, forced to postpone meeting with important customer. Telephone calls poorly handled by his employees lose the customer for him; he calls in a telephone representative. (THIS IS AN EXCELLENT FILM -- I HAVE SEEN IT!)

The Eight Parts of a Business Letter, International Theatrical & Television Corporation, 25 West 45th St., New York 19, N. Y., 12 min. Shows how mail is handled, the difference between social and business forms, the parts of a business letter, the envelope address, and the folding and inserting of business letters.

Story of Communication, Encyclopedia Britannica, 22 minutes. Traces the development of communication beginning with writing and printing. Shows the first telegraph and first telephone and links their story with the growing use of electric power in the modern world.

Your Tell-Tale Voice, American Telephone and Telegraph, 20 minutes. Concerned with control of voice for persons who use the telephone in business, but gives many helpful suggestions for all users.

h. HIGH SCHOOL TEXTBOOK:

Crabbe, Ernest H., Enterline, Herman G., and DeBrum, S. Joseph, General Business. Cincinnati, Ohio: South-Western Publishing Co., 1956.

2. STUDENT REFERENCES

a. STUDENTS ABOVE AVERAGE

The following references are for students who are above average. They include books, pamphlets, and periodicals. Each student is to turn in a written review of some outside reading. These lists are springboards for the students.

Aurner, Robert R. Effective Communications In Business, Chicago: South-Western Publishing, 4th edition, 1958.

Menning, J. H. and Wilkinson, C. W. Writing Business Letters, Homewood, Illinois: Richard D. Irwin, Inc., 1955.

Tressler, J. C. and Lipman, Maurice C. Business English in Action, Boston: D. C. Heath and Co., 2nd edition, 1957.

Selds, G. "New Mass Media and the Thinking Man." American Association of University Women Journal, 54: 24-6, October 1960.

Lewis, R. N. "Course in Communication for High School Seniors." English Journal, 49: 108-12, February 1960.

Dilley, D. R. "Business Manager Looks at Business Writing." English Journal, 50: 265-70, April 1961.

Stansfield, R. N. "Your Better Business Letter." Balance Sheet, 41: 400-1, May 1960.

Dilley, D. R. "What a Student Needs to Know About Writing for Business." Balance Sheet, 42: 162-5, December 1960.

Mandel, M. B. "Telephone Performance Tests." Balance Sheet, 44: 398+, May 1963.

PAMPHLETS (already listed)

HIGH SCHOOL TEXTBOOK (already listed)

b. STUDENTS -- AVERAGE

Aurner, Robert R. Effective Communications in Business, Chicago: South-Western Publishing, 4th edition, 1958.

Tressler, J. C. and Lipman, Maurice C. Business English in Action, Boston: D. C. Heath and Co., 2nd edition, 1957.

Babenroth, A. Charles and Parkhurst, Charles C., Modern Business English, New York: Prentice-Hall, Inc., 3rd edition.

Larson, G., Business English Essentials, New York: Gregg Publishing Company, 2nd edition, 1959.

Leslie, Louis A. 20,000 Words, New York: Gregg Publishing Company, 1951.

Schwartz, M. M. How to Write Successful Business Letters, New York: Grosset, 1958.

Stone, et. al., Basic Handwriting, Bobbs-Merrill Company, Inc., 1958.

Cook, Fred S. Junior High Typing, Chicago: Gregg Publishing Division, McGraw-Hill Book Company, 1959.

Linder, M. "Your Speech Reveals You." Clearing House, 34: 299-300, January 1960.

Dallman, M. "Social Usages." *Grade Teacher*, 77: 50-1, December, 1959.

Hart, E. "Hello, How's Your Telephoning?" *Balance Sheet* 44: 65-6, October 1962.

PAMPHLETS

HIGH SCHOOL TEXTBOOKS

c. STUDENTS -- BELOW AVERAGE

Stewart, Marie M., et. al. *Business English and Communications*, New York: Gregg Publishing Division, McGraw-Hill Book Company, Inc., 2nd edition, 1961.

Leslie, Louis A. *20,000 Words*, New York: Gregg Publishing Company, 1951.

Handy, R. S. *Business Correspondence in Practice*, New York: Pitman and Sons, 2nd edition, 1957.

Julio, F. T. "Let's Adopt a Ship." *Grade Teacher*, 75: 84+, October 1960.

McKee, Paul, et. al. *English for Meaning 8*, Boston: Houghton Mifflin Company, 1960. (Chapters 4, 9, 13, 14, 31, 32, and 33.)

Bailey, Matilda and Walker, Lalla, *Our English Language 8*, Chicago: American Book Company, 1960. (Chapters 2 and 8)

Better Handwriting for Everyone, Editorial Board, Committee of Educators and the Handwriting Research Institute, Noble and Noble Publishers, Inc., 67 Irving Place, New York 3, New York.

PAMPHLETS

HIGH SCHOOL TEXTBOOKS

DAILY LESSON PLAN - 6

UNIT: Communications for Everyday Living
INSTRUCTOR: C. D. Kuta
CLASS: General Education
DATE: March 23, 1967
ROOM: 105
TIME: 2nd Period, 9:35-10:30 a.m.

AIMS:
1. To show the procedure for telephoning, from locating the number to terminating the call.
2. To develop the ability to employ experts in lecture-discussion.
3. To develop student awareness and appreciation of community resources.
4. To improve pupil behavior in courtesy toward guests.
5. To improve the ability to ask intelligent questions based on a presentation.

PREPARATION:
1. Secure two guest speakers from the telephone company.
2. Arrange for the guests to be escorted from the office to the General Business room, from the General Business to office.
3. Secure tape and tape recorder.
4. Set up two chairs and a table for the guests!
5. Arrange for student secretary, student to introduce the guests.

PRESENTATION:

9:35-9:40	Take roll; student read announcements
9:40-10:10	Introduce the guests, role-playing situations by the guest experts.
10:10-10:20	Question-answer period based on the presentation.
10:20-10:30	Role-playing by students.

EVALUATION:
1. Did the students gain as much from the resource guests as they should? Did the students respond to them?
2. Were the students able to take part effectively in the role-playing?
3. Were the students as courteous as they should be?

ASSIGNMENT:
1. Briefly summarize the procedure for telephoning, from locating the number to terminating the call, in a descriptive paragraph or a topical outline.

ADJUSTMENT:
1. The role-playing can be continued if there is time left over at the end of the period.
2. If there is not sufficient time, the role-playing can be done tomorrow with the students, which may serve as a good review and evaluation method for the guest speakers' effectiveness.

REMARKS:

Name ____________________

Score ____________________

EVALUATION SHEET FOR SE 411, FOR STUDENT CONSTRUCTED YEARLY PLAN, TEACHING UNIT AND DAILY LESSON PLANS

The outline lists the items which should be included in the yearly plan, teaching unit, and daily lesson plans which the SE 411 students have constructed. The major headings are capitalized and the items which should be included under each of these headings are also listed. Do not mark the units so severely or leniently that all of your scores are high or low, or so moderately that you do not have any scores at either end of the scale.

(The point values will be determined at a later date.)

I. YEARLY PLAN

A. Identification -- 5
- _1/2_ 1. Subject Field
- _1/2_ 2. Specific Subject
- _1/2_ 3. Course Title
- _1/2_ 4. Grade Level
- _1/2_ 5. Prerequisites
- _1/2_ 6. School Period
- _1/2_ 7. Course Duration
- _1/2_ 8. Student Age Range
- _1/2_ 9. Class Size
- _1/2_ 10. Student Intellectual Capacity

B. General Objectives -- 9
- _3_ 1. Knowledge and understandings to be developed by the students.
- _3_ 2. Abilities and skills to be developed by the students.
- _3_ 3. Attitudes and appreciations to be developed by the students.

C. Course Content -- 5
- _5_ (As indicated by unit titles.)

D. Required Textbook -- 1
- _1_ (Give complete bibliographic information.)

TOTAL -- 20

II. THE TEACHING UNIT

A. Identification -- 2

1/2 1. Unit title
1/2 2. School Period: Hour of the day in which the class meets
1/2 3. Unit Dates: Beginning and completion dates for the unit
1/2 4. Number of School Days the Unit will cover

B. Specific Objectives -- 7

2 1. Specific knowledge and understandings which the unit will help the student develop
2 2. Specific abilities and skills which the unit will help the student develop
3 3. Specific attitudes and appreciations which the unit will help the student develop

C. Unit Introduction --- 15

4 1. A narrative account of the introductory remarks made by the teacher which gives the need and rationale for studying this unit.
4 2. A descriptive list of unit activities.
0 3. A concise description of the relationship of the present teaching unit to:
  2 a. the preceding unit;
  2 b. the following unit;
  3 c. other areas in the secondary school curriculum.

D. Core of the Unit -- 30

10 1. Specific Objectives: specific content and activities are selected to accomplish the specific unit objectives and recorded here.
5 2. Unit Content: the specific information which makes up the unit knowledge
5 3. Unit Activities: the specific activities which the students participate in learning the unit content which accomplishes the unit objectives
5 4. Resource Materials: include books, charts, periodical articles, pamphlets, or people.
5 5. Teaching Aids: any item which makes the lesson more efficient and effective, such as the tape recorder, chalkboard and chalk.

E. Evaluation -- 20

7 1. A unit test should include at least five of each of the following types of test items, unless otherwise authorized by professor:
   a. Essay-discussion questions,
   b. Completion items,
   c. Matching items,
   d. Multiple choice items,
   e. True-false items

4 2. Directions for administering and scoring each section of the test.

3 3. A sample answer sheet and scoring key for the unit test.

2 4. Teacher self-evaluation instrument: a means by which a teacher can evaluate his own success.

2 5. Student self-evaluation instrument: a means by which student can evaluate his own success.

2 6. Method of reporting student performance to parents.

F. Bibliography -- 10

5 1. References for the teacher

5 2. References for the student whose ability is:
   a. Above average
   b. Average
   c. Below average

III. DAILY LESSON PLAN -- 16

1 1. Identification: The pertinent information about the class

3 2. Objectives: specific aims which will be worked toward on a particular day.

3 3. Preparation: The activities, materials which the teacher must prepare before class.

3 4. Presentation: the order and time when each of the activities will take place.

3 5. Evaluation: the techniques which will be used by both teacher and student to evaluate the class.

1 6. Assignment: the learning experience which takes place outside of school.

1 7. Adjustment: suggestions for changing the class procedure if the time is too short or too long.

1 8. Remarks: Comments or reminders which will make the class run more smoothly.

TOTAL --- 100

IV. Make any additional comments you wish to in the space provided below and on the back of this sheet.

SE 411

NAME ______________________

SCORE ______________________

SUBJECT MAJOR ______________________

UNIT TITLE ______________________

Evaluation of "Teaching Unit" (Total Points Possible - 100)

Identification	(2)	______________
General Objectives	(7)	______________
Introduction	(15)	______________
Core of the Unit	(30)	______________
Evaluation	(20)	______________
Bibliography or reference materials	(10)	______________
Daily Lesson Plans	(16)	______________
TOTAL	(100)	______________

- -

Make any additional comments you wish to in the space provided below.

APPENDIX C

TEACHING UNIT CHECKLIST

	CONTENT	BOOK REFERENCE	APPENDIX REFERENCE
I.	Yearly Plan (ten months)	18	A-80
	A. Identification	24	A-80
	B. General objectives	26	A-80
	C. Course content	28	A-81
	D. References	28	A-81
II.	Teaching Unit (ten days)	29	A-82
	A. Identification	39	A-82
	B. Specific objectives	40	A-82
	C. Unit introduction	50	A-83
	D. Core of the unit	51	A-86
	E. Evaluation	63	A-88
	F. Bibliography	76	A-99
III.	Lesson plans (five days)	77	A-105
	A. Identification	78	A-105
	B. Aims	78	A-105
	C. Preparation	78	A-105
	D. Presentation	78	A-105
	E. Assignment	78	A-105
	F. Adjustment	78	A-105
	G. Remarks	79	A-105